THE BUILDER

A Journal for the Architect & Constructor

JUNE 15, 1928 — No. 4454

LEADING CONTENTS

ARTICLES	PAGE
Leader : The New Allied Society	1013
Notes	1014 & 1015
General News	1016
Competition News	1016
Week in Parliament	1016
Correspondence	1017
"The Builder" Debate	1017
The Repair of Ancient Buildings : XXIV. By A. R. Powys, A.R.I.B.A.	1018
Decorative Sculpture	1019
Notes on Illustrations	1020
Meetings	1020
Some Roman Monuments in Provence. By F. T. Baggallay, F.R.I.B.A.	1030
Planning of School Buildings	1031
Societies and Institutions	1032
Obituary	1033
The Housing Problem	1033
Central School of Arts and Crafts	1034
Acoustics of Auditoriums	1035
Reinforced Concrete	1036
Architects' and Builders' Inquiry Bureau	1037
Legal Questions We Have Been Asked. By W. T. Creswell	1037
Everyday Science for Architects and Builders : XXIII. By A. M. Giles	1038
The Rating and Valuation (Apportionment) Bill	1039
National Association of Building Societies	1040
National Housing and Town Planning	1041
New Buildings in London	1041
Rates of Wages in the Building Trade	1042
Contracts, Competitions, etc.	1043-1045
Proposed New Buildings and other Works	1045
Prices Current of Materials	1047
Current Prices for Building Work in London	1049
Tenders	1050-1052

ILLUSTRATIONS

INSET PLATES :

New Town Hall and Shops, Peterborough. Mr. E. Berry Webber, A.R.I.B.A., Architect.

The Lord Wandsworth Agricultural College, Long Sutton, Hampshire : Junior Boys' Hostel. Mr. E. Guy Dawber, A.R.A., PP.R.I.B.A., Architect.

	PAGE
Chester House, Clarendon-place, W. Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Architect— Detail of Entrance	1012
General View	1021
Masks for the British Government Pavilion. Toronto Exhibition. Modelled by Mr. Percy Bentham. A.R.B.S. Messrs. Richardson & Gill, FF.R.I.B.A., Architects	1014
The Lincoln Building, 42nd-street, New York City	1015
Higham's Park Telephone Exchange. Mr. John H. Markham, F.R.I.B.A., Architect (H.M. Office of Works)	1022
Manchester Municipal College of Technology, Competition for Proposed Extensions : Second Premiated Design. By Mr. Frank Lishman, F.R.I.B.A.	1023-1026
The Samuel Augustine Courtauld Institute of Bio-Chemistry, Middlesex Hospital. Mr. Alner W. Hall, F.R.I.B.A., Architect	1027-1029
"Briarcombe," Carbery-avenue, Bournemouth. Mr. Horace Dan, L.R.I.B.A., Architect	1034

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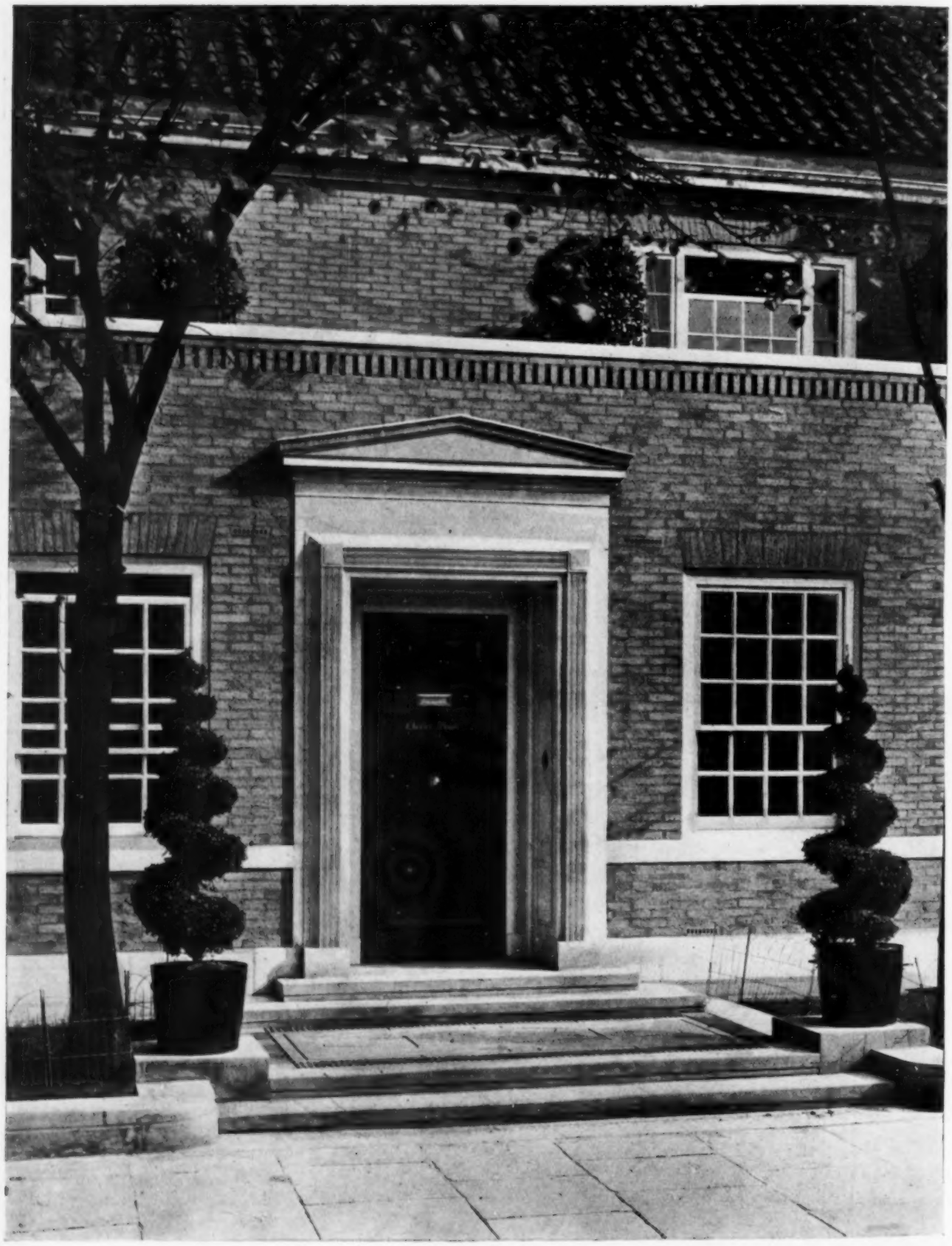
86TH YEAR



Chester House, Clarendon Place, W.: Detail of Entrance.

(Awarded the R.I.B.A. London Architecture Medal, 1927.)

Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Architect.

THE BUILDER

A JOURNAL FOR THE ARCHITECT AND CONSTRUCTOR

WITH WHICH IS INCORPORATED "THE BRITISH ARCHITECT."

VOL. CXXXIV. No. 4454. JUNE 15, 1928

THE NEW ALLIED SOCIETY

THE South-Eastern Society of Architects, which became finally inaugurated this week after a series of chapter meetings at various county centres, does not form a new group of practitioners, but merely gives corporate expression to such a group that has been in existence since architects first practised in the country. Within a very few miles of Charing Cross one cannot fail to be impressed by the different professional atmosphere one meets as compared with central London. Practice in the Provinces, compared with practice in London, is as chalk to cheese, and in recognising the difference there is no need to make invidious comparisons, but merely to accept the obvious fact that different problems are met in different ways.

To most of the architects practising in London, the office is simply a centre of convenience. It needs to be where the professional man is generally sought, and a suitable base for business action. The work that is turned out in a particular office is not likely to be carried out in the same neighbourhood, and in many London offices most of such work is carried out in the country and not in the London area at all. The contractors who are dealt with may be old favourites in many instances, but their places of business are far afield in a comparative sense, and personal contact between builder and architect is a matter of comparatively rare occurrence.

In the country and provinces the case is widely different. There the office is a veritable centre of action. Builder, client and job are, in most cases, local, and meetings between individuals concerned together in building effort may be as much social as otherwise. It is inevitable that the relations between architect and client will be different where daily intercourse is possible and where contact is not entirely a matter of business or polite social respect. It is equally clear that a builder who lives "next door" to the office, so to speak, will be directed by the architect in different form from the more precise London manner. These things are determining factors in the daily life of the provincial architect. that affect his outlook, his interests, and often mould his style of building.

There is no need to differentiate between the provincial and the country architect of the home counties. Most of the provincial cities have more in common with the country town than with the Metropolis. What is important, is that within a few miles of the centre of London there is in existence a professional atmosphere that hitherto has found no corporate expression. It is true that from most parts of the counties of Kent, Surrey and Sussex, a short rail journey will bring any individual to the general meetings of the Institute, if such an individual feels starved of professional intercourse; but it is to be feared that in most cases he has shirked the effort under the excuse that these are "London" functions which he is little in touch and which are little in sympathy with him and his like.

There will, doubtless, be some who regard this new society as a mere duplication and who will say that an allied society is only needed where the district served is so far removed from London as to preclude the architects of the district from attending the meetings at headquarters. In this we believe there is a complete misunderstanding of the inner purpose of an allied society. The whole trend of politics to-day is towards the policy of devolution. Large corporate bodies are essential for the broad principles of uniformity, but they become totally unwieldy if their functions are applied towards the settlement of local details. Their effectiveness in the broader sense suffers when the microscope is included in equipment. So it is, therefore, that the matter of geography and convenient access become of smaller relative importance in weighing the merits of the case.

The choice of centres for the various chapters of the South-Eastern Society of Architects has been wisely made for the convenience of its members, but it is still possible that in certain individual cases a short trip up to town will be less of a serious problem than one to the chapter centre. The real point is, of course, that though a visit to the headquarters meeting is a useful and profitable experience, it is not an alternative to the chapter meeting. An architect needs to mix with his particular kind if he is to profit by common experience, and at the same time contribute his own experience for the benefit of others, and at his own local society meeting he will be mixing with those who are facing problems similar to those he is meeting in his own town. It is an excellent thing that he should be afforded these facilities. It may be that in years to come the London practitioners may feel the need for some local expression, leaving the central Institute in an even more federal condition than it is now. We are not sure that this would not be an excellent move; but we are quite sure that the new society just formed is meeting a real need that has existed for many years. We have no doubt whatever that not only will it be a power for good inside the ranks of the profession, but that it will diffuse a similar influence outside the ranks, in matters that have been so often mishandled in country places.

The society has come to life in an atmosphere of enthusiasm. It is to be hoped that it will not fade into the ineptitude of apathy after the first flourish of trumpets has died down. It is hardly necessary to warn the new members that occasions will arise when attendance at a local meeting may seem an irksome duty. Long journeys by car in the winter time may prove as onerous as the frequent changes and stops upon a branch line, and business itself will not always be so accommodating as to leave clear the one day in the month every time. We can only urge upon the new members to spare no effort to maintain the spirit of good will and enthusiasm which the promoters of this project have so admirably infused into it. Upon the body of the membership will devolve the final judgment as to whether the movement has been well or ill-conceived, and they will have to realise that no benefits can be assured where those who are to benefit are not prepared to give of their best in exchange. The Rotarian motto of "Service before Self" might be adopted by all such corporate societies as these, for this is the spirit that will maintain them in constant efficiency.

In wishing the South-Eastern Society of Architects the best of good fortune, and an honoured history in the making, we believe we shall be voicing the feelings of every member of the Royal Institute of British Architects, as well as every one of the other allied societies already in existence. We and they will watch its progress to maturity with the keenest interest and sympathy.

NOTES

Amenities of Chester.

The new buildings which are erected from time to time in our old towns may do much to injure the beauty and effect of their surroundings, and we think the proposed new building in Eastgate Street, Chester, adjoining the old bridge, is a sufficient subject for a strong protest from the Royal Institute of British Architects. The illustration which appears in the *Chester Chronicle* of the elevation of the proposed building makes comment unnecessary. We can hardly believe it possible for the Chester City Council to allow such a design to be erected. Chester is not a city whose beauty and amenity concerns its citizens alone. It is a valuable heritage of the English people, and it is surprising that its official custodians can be so regardless of artistic quality as to allow any building to be erected which may happen to pass the by-laws whatever its design may be. We sincerely hope that prompt and influential protest may be made by the Chester and Liverpool architects as well as by the R.I.B.A.

Modernism in Architecture.

The discussion on Modernism in Architecture at the Institute suggests some comment. It might appear that there are two opposing elements in architectural thought nowadays, one which holds fast by tradition and a gradual orderly development therefrom, and one which seeks above all things to live in the van of modern progress, so that if necessary it could regard the Parthenon as a "triangle set on a lot of drain-pipes." We think it is well to believe that those who are conservative are not necessarily unsympathetic to the claims of progress and modernism. In the attempts at an expression of modernism some very unfortunate results have been achieved, especially on the Continent. And the worst of it is that the experiments in design of buildings are far worse in effect than all the bad experiment made in paintings and work of a more ephemeral nature, for buildings of an appalling character may remain permanent eyesores for many years.

Newcastle Town Planning.

We take the following extracts from a letter addressed to a Newcastle daily paper by a Mr. James Dellow, in which reference is made to a recommendation of the Town Improvement and Streets Committee to engage the services of Mr. H. V. Lanchester to advise as to the most suitable site for the proposed Municipal Buildings. The following is the recommendation:

"That Mr. H. V. Lanchester be appointed to advise as to the most suitable site, taking into consideration the proposals of the Town Improvement and Streets Committee with regard to town planning."

"Is it necessary," says the writer, "to call an outsider to help us to decide upon a site whereon buildings worthy of our city should be placed? . . . Newcastle has traditions, history, romance, and a geographical position that is unique among all the industrial towns of which I have any knowledge; but it lacks a pile of buildings worthy of all these, and as a step to a remedy a Special Committee seriously invites the governing body of our city to ask a gentleman to travel 300 miles and find out for us where such buildings shall be placed. Faugh!"

The Work of "Outside" Architects.

We cannot help feeling that this correspondent has not realised the truth of the phrase, "the onlooker sees most of the game." When one has grown up in and become acclimatised to a city, it is very difficult to give a fresh opinion on a radical change, especially in relation to a town-planning project such as is here apparently contemplated. Local interests, sentiment and the continuous conflict of opinion stand in the way. In these circumstances, the only resort is to delegate the task to an outside person. By such, a natural, even an obvious solution of the problem may quickly be found. The correspondent's implied opinion that an "outsider" should be incapable of designing a

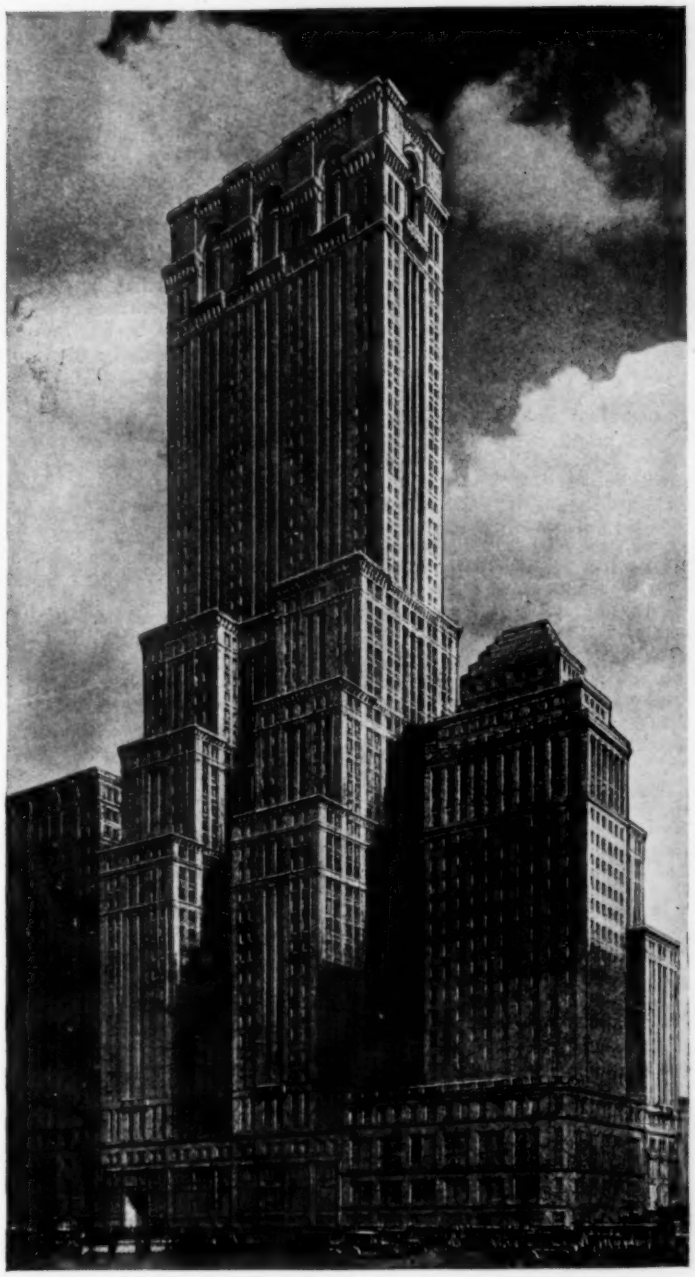
Masks for the British Government Pavilion, Toronto Exhibition.

Modelled by Mr. Percy Bentham, A.R.B.S.: Messrs. Richardson & Gill, FF.R.I.B.A., Architects.

"pile of buildings" worthy of Newcastle's tradition must count for little when the successful schemes for the many public buildings throughout the country, designed by "foreign" architects, are considered.

The Development of West Surrey. THE report on the proposed development of Mid-Surrey, just published, deals with some of the most beautiful country in the south of England. Here are the pine woods of Leith Hill, the heather of Walton Heath, the beech woods of Box Hill, the open spaces of Ranmore Common and Banstead Heath, and old towns, manor houses, and survivals of almost every period as far back as the Roman occupation and even earlier. The local authorities responsible for Mid-Surrey have fortunately realised that the modern tendency towards the decentralisation of industry and population makes it abundantly clear that all land within 50 miles of London must now be regarded as liable to development. Accordingly the Mid-Surrey Joint Town Planning Committee was set up two years ago and was formed of representatives of the Councils of Reigate Borough and Reigate Rural District, of Dorking Urban and Rural Districts, Leatherhead Urban District and Caterham Urban District, together with representatives of the Surrey County Council and the West Surrey Joint Town Planning Committee. Messrs. Adams, Thompson and Fry, town planning consultants, were appointed to advise the Committee on the preparation of a regional plan in collaboration with a technical sub-committee. Their proposals are embodied in the report just published.

Places of National Beauty. THE regional plan put forward has of course no statutory significance and the recommendations will need to be incorporated in actual town-planning schemes. It is not, however, proposed that the local authorities should embark at once upon a number of expensive public works. Rather the recommendations are designed to save expenditure by drafting a plan to ensure that any money expended in the future shall be put to the most productive use. The Mid-Surrey region comprises an area of rather more than 150 square miles. It is, however, sparsely populated and has a rateable value of over £700,000. Of special interest are the suggestions made for the protection of places of natural beauty. It is pointed out that in a rural district the preservation of amenities depends upon the careful disposition of the buildings erected and the suitability of the materials used. Accordingly the report suggests the creation of a special rural zone including the escarpment and lower slope of the North Downs, and the district surrounding Leith Hill, together with Norbury Park and Ockley Village. It is urged that this district, possessing some of the finest scenery in the South of England, should be strictly controlled. Industrial buildings should be entirely excluded and especially careful control exercised over all new buildings. There are a number of other detailed recommendations in the report, especially with regard to open spaces, roads, the preservation of trees, the control of advertisements, the lay-out of petrol-filling stations, and the safeguarding of the old towns and villages. The honorary clerk of the committee, from whom copies of the report can be purchased, is the Town Clerk of Reigate.



The Lincoln Building, 42nd Street, New York City.

A New Skyscraper for New York. To the numerous skyscrapers of New York a new one is shortly to be added. To be known as the Lincoln Building, it will be 52 stories high and will occupy an acre of the costliest land in the world. An association of banks, headed by the Chase Securities Corporation, partner of Imperial Chemicals in control of the Finance Company of Great Britain and America, is financing the project, which is estimated to cost £5,500,000. The new skyscraper will be situated in 42nd Street, and will be opposite the Grand Central Building, the eastern terminus of the New York Central Railway. It will rise to a total height of 640 ft., and will have, approximately, 915,000 square feet of rentable area. The reproduction which we give is from a photograph of the architect's sketch. Unfortunately, at the time of writing, the architect's name has not come to hand.

The late Mr. Charles Reilly. THE late Mr. Charles Reilly, of Upminster, who had been a retired fellow of the Institute since 1922, died on Tuesday, June 5. At his death he was probably the senior member of the Institute, as he was made an Associate 56 years ago. He was architect to the Drapers' Company, and from the obituary notice which we give on p. 1033 it will be realised that his was a long and active career. He was the father of Professor Reilly, of Liverpool University.

GENERAL NEWS

Professional Announcement.

Mr. Herbert C. Clark, F.I.A.A., architect, has opened an office at 165, High-street, Orpington, Kent, and will be glad to receive trade catalogues.

The Halifax By-Election.

Major Harry Barnes, F.R.I.B.A.—who represented Newcastle East Division from 1918 to 1922—has been adopted as the Liberal candidate for the Halifax by-election caused by the retirement of the Speaker, Mr. J. H. Whitley.

New Thames Bridges.

The Surrey County Council on Tuesday approved of the design of the proposed new Thames bridge at Hampton Court which has been prepared in collaboration with Sir Edwin Lutyens. The bridge will have a centre arch of 105 ft. span and two side arches each of 95 ft. span. The roadway over will be 70 ft. wide, with footpaths each 15 ft. wide, and elevation will be in red brick and Portland stone. The council also approved of the design of the proposed new bridge over the Thames at Chiswick, but in regard to the proposed new Richmond bridge decided to ask the Joint Middlesex and Surrey Committee to vary the design so as to show an alternative treatment of the proposed towers and abutments, with a view to the omission of the towers.

Institution of Civil Engineers.

The Council of the Institution of Civil Engineers have made the following awards in respect of papers read and discussed at the ordinary meetings during the session 1927-1928 :—

Telford Gold Medals to Dr. Oscar Faber, O.B.E., M.INST.C.E. (London), and Mr. G. L. Watson, M.INST.C.E. (Newark, New Jersey); Telford Premiums to Professor John Goodman, M.INST.C.E. (Skipton); Mr. James Williamson, M.INST.C.E. (Wallington); Mr. R. M. Wynne-Edwards, D.S.O., M.C., B.A., ASSOC.M. INST.C.E. (Vancouver); and jointly to Mr. F. C. Vokes, B.SC., ASSOC.M.INST.C.E. (Birmingham), and Mr. C. B. Townend, B.SC., ASSOC.M.INST.C.E. (Birmingham).

Hampstead Garden Suburb.

This suburb—a pioneer in the town-planning movement—will celebrate its "coming of age" from June 23 to 30.

The suburb was laid out on town-planning lines prior to the passing of the original Town-Planning Act. A special Act of Parliament was therefore obtained to enable the promoters to achieve the end in view. The lay-out of the estate is the work of Messrs. Barry Parker & Raymond Unwin, FF.R.I.BA., in consultation with Sir Edwin Lutyens, R.A. The area originally purchased by the Trust was 243 acres of farmland (Wyldes Farm and Temple Fortune Farm) to which a further area of 415 acres has since been added.

On May 2, 1907, the first sod was cut, and on October 9, 1907, the first house was declared open by the late Sir Wm. Treloar, then Lord Mayor of London. The population is now about 12,000. On Saturday, June 23, at 3 o'clock, the "opening ceremony" will take place in the Central Square, to be presided over by Rt. Hon. Sir Philip Cunliffe-Lister, P.C., M.C., M.P., and addressed by the Rt. Hon. Earl Lytton, G.C.S.I. During the proceedings Mr. Herbert A. Welch (Chairman of the General Organising Committee), on behalf of the residents of the Hampstead Garden Suburb, will present an address to Dame Henrietta O. Barnett, D.B.E. Pageants, plays, sports tournaments of all kinds, will take place during the week. Full details may be obtained from the Hon. Gen. Secretary, Mr. J. A. Davidson, 153, Hampstead-way, N.W.11.

WEEK IN PARLIAMENT

WESTMINSTER, *Wednesday.*

The Tax on Turpentine.

Lieut.-Commander Kenworthy asked the Chancellor of the Exchequer whether he had received a resolution, passed unanimously by the National Federation of Paint, Colour, and Varnish Manufacturers of the United Kingdom, protesting against the turpentine duties as imposing burdens on the paint and varnish industry; if he was aware that turpentine was a vegetable spirit which cost three times as much to produce as white spirit and could only be considered a competitor of white spirit in that its use at considerably increased costs resulted in the production of paint and varnish of higher quality; that turpentine could not in any circumstances be produced in Great Britain and was incapable of use in internal combustion engines; and whether, in those circumstances, he would favourably consider exempting turpentine used in the manufacture of paint and varnish from duty.

Mr. Churchill replied that a resolution such as was mentioned in the first part of the question and containing the statements made in the second and third parts had been received. As regarded the fourth part, he regretted that he could not see his way to give the exemption suggested.

A Teignmouth Case.

Mr. Hayes asked the Minister of Health whether he was aware that although he stated in the House on November 16, 1925, that the Teignmouth Council had appointed a housing committee which was investigating the question of suitable and available sites for houses, the council had no housing committee and that it had not yet selected sites for housing purposes; and what action he proposed to take in the matter.

Mr. Chamberlain said that the hon. member had been misinformed. He understood that the local authority in question had a housing committee, and had in fact purchased a site of about 3¼ acres and entered into a contract for the erection of 28 houses, eight of which had been commenced. He had sanctioned the requisite loans to enable the local authority to proceed with the scheme.

A Torquay Subsidy.

Mr. Hayes asked the Minister of Health whether he would state the cost of and the prices, inclusive of subsidy, received by private builders for houses built under the scheme of the local authority in Torquay; and the amounts of subsidy received by the builders.

Mr. Chamberlain said that he had no information as to the actual cost and selling prices of houses erected by private enterprise under the subsidy scheme at Torquay. Under the Town Council's scheme for the assistance of private enterprise it was a condition of the grant of subsidy that the net freehold selling price of the house should not exceed £600 after allowing for subsidy. The amount of the subsidy given by the Town Council was £120.

Unsightly Petrol Pumps.

During the report stage of the Petroleum (Amendment) Bill in the House of Lords, an amendment, moved on behalf of the Government by Lord Desborough, was agreed to, empowering county and borough councils to make by-laws in respect of the erection of petroleum filling stations in the neighbourhood of any public park or pleasure promenade, or of any street or place which is of interest by reason of its picturesque character. A further amendment, also moved by Lord Desborough, was agreed to, providing that, without prejudice to the generality of the foregoing provisions, any by-laws regulating the appearance of petroleum filling stations might in particular require compliance with such provisions as might be contained in the by-laws as to the position, design, size, colour and screening of petroleum filling stations or any parts thereof. A new sub-section was agreed to, providing that, where by-laws were in force prohibiting the establishment of petroleum filling stations in any part of the area of a council, the council might serve on the occupier of a station, established before the date on which the by-laws came into force, a notice requiring him to move it within a specified period, nothing less than six months.

Houses under Construction.

Sir K. Wood informed Mr. Wellock that at May 1 last, the latest date for which statistics were available, the number of houses under construction in connection with schemes under the Housing Acts of 1923 and 1924 was 57,992, and the number sanctioned but not started was 86,985. The corresponding numbers on May 1, 1927, were 117,491 and 106,580 respectively. The numbers of houses completed under the Acts during each of the three months ending in April last were 6,623, 7,180, and 7,469 respectively.

COMPETITION NEWS

Entertainments Pavilion, Exmouth.

The Exmouth Urban District Council invites designs from architects for an entertainments pavilion to seat 1,000 persons, and café, on a site adjoining the esplanade. Premiums of £100, £50, and £25 are offered. Mr. C. Cowles-Voysey, F.R.I.B.A., has been appointed assessor. Conditions of competition may be obtained, on deposit of £1 1s., from Mr. B. Benoy, Clerk to the Council, Exmouth, Devon.

New Town Hall, Shops and Offices, Lewisham

We learn that ninety designs have been sent in for this competition. The assessor is Mr. Winton Newman, F.R.I.B.A.

COMPETITIONS OPEN.

	Particulars published in "Builder."	Sending in date
School at Rickmansworth to accommodate 400 senior girls, for the governors of Royal Masonic Institution for Girls. Premiums: £750, £500, £400, £300 and £200. Mr. H. V. Ashley, F.R.I.B.A., Assessor. Apply, Mr. M. Beachcroft, 31, Great Queen-street, W.C.2. Deposit £2 2s.	1927. Dec. 9	1928 Sept. 5
Town Hall and Municipal Buildings, Art Gallery, etc., for the Corporation of Southampton. Mr. H. Austen Hall, F.R.I.B.A., assessor. Premiums of £500, £300, £150. Mr. R. R. Linthorne, Municipal Offices, Southampton. Deposit £2 2s.	March 9	—
Scheme for London Aircraft Terminus, for H. H. Martyn & Co., Ltd., and the Gloster Aircraft Co., Ltd., R.I.B.A. Jury of Assessors. Premiums of £125 and £25. The Secretary, R.I.B.A., 9 Conduit Street, W.1	March 2	Sept. 1
Memorial Lighthouse to discoverer of America at Santo Domingo, for the governing board of the Pan-American Union. Premiums totalling £11,250 are offered. Mr. Albert Kelsey, Pan-American Union, Washington, D.C., U.S.A.	March 2	—
Houses at Mount Merrion Park, Co. Dublin, for the Administrator, Mount Merrion Park. Mr. James Webb, P.R.I.A.I., 31, South Frederick-street, Dublin...	May 25	—
Lay-out of Harbour Station Site, Ramsgate, for the Corporation. Premiums of £250, £150 and £100. Conditions from Mr. A. Blasdale Clarke, Town Clerk, Albion House, Ramsgate. Dep. £1 1s. ...	May 25	—
Concrete houses. Prizes of of £100 and £50 (to architects) and £50 and £25 (to builders) for best all-concrete houses erected in 1928. Assessor, Mr. E. Guy Dawber, A.R.A. Secretary, British Portland Cement Association, Ltd., 20, Dartmouth-street, S.W.1	June 8	—

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Charing Cross Bridge.

SIR,—Mr. F. Nesbit Kemp's letter in your issue of last week is interesting, but, in my opinion, the scheme is not suitable for the position, owing to the suggested new road discharging into the Strand, which is very narrow at this part and crosses the end of the new road at right angles. This would create an impossible traffic block. To make the scheme workable it would be necessary to remove the Golden Cross Hotel and make an open space between the end of the new road and St. Martin's Churchyard.

My proposal would be to make the approach to the new bridge along Northumberland-avenue. By this means traffic would be easily directed into Trafalgar Square and spread from thence in different directions. The gradient would start near the Grand Hotel and rise up to the level of the new bridge, giving ample clearance for the traffic below along the Embankment.

I realise that alterations would have to be made to the entrances to the hotels, etc., at present in Northumberland-avenue, but these should not be insuperable and would only be such as have to be encountered in all improvement schemes.

WM. E. A. BROWN.

SIR,—The Charing Cross Bridge scheme will cost the taxpayer some £13,000,000. The Currency and Bank Notes Bill has passed its second reading. Under this Bill the Bank of England will "take over" the Treasury note issue, which, together with the Bank of England's own fiduciary issue, amounts to over £264,000,000, and will reissue for this amount £260,000,000 in Bank of England notes. Thus will be destroyed over 4½ million of good purchasing power which, up to the present, is King's money and has been paid for out of the pockets of the public.

The money for the bridge scheme will be raised by "loans." Such "loans" will be paid off by the taxpayer, in the usual way, in about 40 years, so that the £13,000,000 will by that time amount to about £39,000,000 in interest and capital repayments.

Apart from any other consideration, does it not seem common sense to suggest the earmarking of this £4½ million of Treasury notes for doing a little work on the bridge before they go on the bonfire?

ARTHUR WELFORD.

Modern Flats in London.

SIR,—May I suggest that the valuable contribution on this subject in your issue of June 1 is marred by some error or obscurity of statement? It is difficult to understand the formula "48/12 = 25% = gross return," when told that "12s. = the assumed rental value *per square of floor space*," and I suggest the words in italics should read "per square foot of floor space." Again, "If the 'plain' is pliable" is evidently intended to imply "If the 'plan' is pliable."

As site value and space occupied by stairs, lift, corridors, etc., enter into the financial question, the cost of site added to total cost of building compared with the total estimated rental value of the flats after allowance has been made for cleaning, lighting, heating, maintenance, etc., will give the percentage return on capital expended.

F.S.I.

We submitted the above letter to Mr. F. E. Bennett, the author of the article, who writes as follows:—

SIR,—In reply to "F.S.I.," may I be permitted to explain the "ready calculation" more fully? By a study of rental values in the district concerned one may estimate the rent which can be obtained per square foot of the letting space in the new building. The "16" represents the number of cubic feet of building which are required to provide one square foot of letting space. The figure is a rough average one.

Then it is a question of relating the annual rental income to the total building investment so :—

$$\frac{\text{Cost of 16 cubic feet}}{\text{Income per sq. ft. letting space}} = \left\{ \begin{matrix} \text{Gross} \\ \text{rental} \\ \text{income} \end{matrix} \right.$$

$$= \frac{16 \times \text{(say) } 3/-}{\text{say, } 12/-} = \frac{48}{12} = 25\%$$

The word "plain" should read "plan."

F. E. BENNETT.

Breeze Blocks.

SIR,—We are interested in the correspondence on this subject in your columns, being one of the pioneer manufacturers of this article, which was introduced into this country about 25 years ago. It would be interesting to learn Mr. Jay's theory of what chemical action takes place with coal and whether he thinks all classes of coal are alike in the results he alleges. We have made experimental partition blocks of coal and cement at a gauge of about 5 to 1, afterwards plastered on them, and no "blowing" took place. We have no recollection of ever having had a single complaint about our breeze blocks "blowing," and, in the face of Mr. Jay's wholesale condemnation, we trust that we are entitled to his further comments through the medium of your columns.

For FREDK. JONES AND CO., LTD.,
J. CHRISTIE, Director.

"Hercules" Partition Works,
Kentish Town, N.W.5.

[A letter by Mr. C. A. Longley on "Facts and Fallacies of Cements" is unavoidably held over.—ED.]

"THE BUILDER" DEBATE

VI.—ARCHITECTURAL COMPETITIONS: THE SCHEME OR THE MAN?

SIR,—When I confessed to having difficulty in opposing "Positive's" motion, it was because he professed to have as his one object the discovery of the finest possible project. Who can quarrel with this sentiment? But after making a careful study of his suggestions for obtaining this end, I would describe his method as "Competitions without tears," or "Much ado about nothing."

He begins by accusing me of being unable to forget the aspect of "contest" in connection with a competition. Surely this very desire to go one better than the other man is the one thing most likely to produce the finest result. He then wanders off into a mild fog of argument which, except for reproducing a few well-worn platitudes, makes no progress whatever.

Unfortunately, after the fog he begins to petti-fog. I will not accuse "Positive" of wilfully misunderstanding me, but I am surprised and disappointed that he should fall to quibbling. He has shown a lamentable weakness by quoting several of my remarks without relation to their context, and attempting, by taking them literally, to give them a different complexion.

As to the five governing clauses of a competition that I enumerated, he is good enough to agree to the first and last. With regard to the other three, I will deal in detail with his criticism, as I think that this alone will be sufficient to show that his attitude of mind is by no means as broad and free as he would have us think.

(b) It must give substantially the amount of accommodation asked for.

"Positive" replies: "This means that if I know of a way of running departments together economically I am not at liberty to suggest it." Why not? One is at liberty to suggest anything in a competition. The very word "substantially" allows a certain latitude, and I should have thought that the reasonableness of this condition would have been obvious.

If the promoters have a certain staff to house, how can they be expected to consider a design in which the accommodation would only house half the amount? Moreover, in raising this point, "Positive" has carefully ignored the fact that I immediately went on to say that a variation of the programme has never in the past prevented a competitor from reaping the due reward of his courage.

On what grounds, therefore, can he substantiate his criticism? Does he set out to provide a building to fulfil his client's requirements, or is it his primary object to run his client's business for him?

(c) It must not exceed the limits of the site. "Positive" replies to this: "This means that if I saw that an extension of the site is possible and vastly to the advantage of the scheme I must not suggest it." Again, why not? Suggest anything by all means, provided that the suggestion is tempered with sweet reasonableness and is a practical consideration. If such an extension is suggested it can only be in the event of additional land being available, otherwise it is a foolish waste of time and effort. If the additional land is available this fact is almost certain to be noted in the conditions.

The real reason for insisting on the limits of the site being adhered to is another obvious one. The laying down of new building lines would be utterly futile if the designer were allowed to wander over them at will. One can always recess from a frontage, but should there be no limit to projection, how can one prevent chaos?

Moreover, should a promoter who has purchased a site of a certain area be allowed to poach beyond his boundaries? I suggest to "Positive" that he puts this to a practical test by attempting to get a building passed—say in London—that projects beyond, and quite ignores, the building line.

(d) It must not exceed a certain cost (*within a fair margin*). "Positive" first of all omits the very pertinent latter sentence, and then goes on to say: "This means that if I see a way of increasing the cost and producing revenue that will more than pay for the increase, I must not suggest it." Once more—Why not? It obviously means nothing of the kind; it is merely another very reasonable condition imposed in order that a promoter who has a certain sum to expend may not waste his time considering schemes which, however beautiful, are utterly beyond the limits of his pocket.

"Positive" is certainly not prevented from showing on his design how additional expense would produce further revenue, provided that he can show an initial scheme which would meet his client's first requirements.

It will be readily seen from "Positive's" method of tackling the subject that all his troubles are self-made in that he has lost the spirit of a competition and is trying to weave obstacles out of niggling details. I reiterate that only the promoters after their consultation with the assessor can know their essential requirements, and this is necessary as a nucleus on which to base the scheme.

I have a fantastic notion that "Positive" would really like each competitor to be consulted individually by the promoters, who would then attempt to sift from the phantasmagoria of facts and fancies they accrued the desirable elements of the programme. What a task!

I regret that I have been forced this time to deal a little less gently with "Positive," but I do feel strongly that this tendency to consider a set of competition conditions as a series of pitfalls for the unwary competitor to be one of the chief causes of misunderstanding in the past. Freedom there has always been. Every schedule of competition accommodation is headed by the notice that it is only suggestive. If he must, let "Positive" vary every rule and condition set down. He can still win, but—*the scheme must be worth it.*

NEGATIVE.

THE REPAIR OF ANCIENT BUILDINGS

By A. R. POWYS, A.R.I.B.A.

XXIV.—THE PROTECTION OF WALL PAINTINGS.

Paintings are commonly found in the British Isles on plastered wall surfaces in domestic and ecclesiastic buildings down to the seventeenth century. In many cases these have been hidden under a coat or coats of limewash, either because they had become damaged or because they were no longer thought fitting. At the present time those which are exposed have, as a rule, been uncovered, and there is no doubt that many more still exist hidden below layers of limewash on old plaster. On this account, wherever old plaster exists, the walls should be examined for wall paintings before any plaster is removed, and before any new decorative washes are applied; and a record should be kept, even if nothing is found.

It will be seen, then, that the treatment of wall paintings comes under two heads—their uncovering and their protection when uncovered.

How to Uncover Wall Paintings Hidden by Limewash.

The removal of the coats of limewash which hide old paintings should only be undertaken by a person experienced in the work, or by someone appointed by him to work at his direction. A knowledge of archæology is also required, as it is frequently found that a wall has been redecorated with paintings in successive centuries each picture being put on a fresh coat of limewash. In such cases it is necessary to know which is the most valuable picture, and a photograph should be taken of each painting as it is exposed. As a rule, it will be found that the painting directly on the original plaster is the best preserved, and that the limewash ground of the later pictures has peeled off in parts centuries ago, and thus rendered the later re-painting desirable. The removal of the upper layers of limewash separately is very difficult. Where it is found that the more valuable painting cannot be uncovered without damage, the work should be discontinued; the wall is, then, better left to hold its secret till some more favoured generation can disclose it.

The removal of the coats of limewash is accomplished in a variety of ways, according to the condition of the wall. It should never be undertaken during building operations. In some cases limewash will flake away if gently lifted by a palette knife lightly inserted below the outer skin. It is more usual, however, to find that this cannot be accomplished till the outer coat has been loosened by gentle taps from the wooden handle of the palette knife. Sometimes it is necessary to press the edge of the knife gently on the very border of the covering limewash and to flake off pieces no bigger than one-eighth or one-sixteenth of an inch with a gradual cutting movement. For this work a fine ivory or bone paper knife has been found useful. Professor W. E. Tristram writes that he has never found anything better for this work than a dinner knife sharpened moderately all round the top. If any process is found to be marring the painting, another must be tried, and possibly it may be necessary to abandon the work altogether.

The removal of limewash from paintings is a most tedious occupation. After working for an hour or two, one is apt to tire and unconsciously to become careless. In that case work must be stopped until interest and energy have revived.

In another article I have referred to the mediæval practice of plastering and limewashing the inside face of walls. But it is not amiss here to re-state that no old plaster should be removed for fear of destroying painting upon it. The builders of old often carried the plaster round the quoins of the inner window jambs, a thing which is never done now. Not uncommonly the painting continues round into the window cheeks, either laid on the plaster above the jamb stones or on limewash directly on the stones themselves. If, therefore, it is desired to preserve an old building intact, care should be taken here, and modern custom should no more be allowed to rule a decision here than elsewhere in a building.

The surface of old paintings, when first exposed, are often dusty, and the colours will rub off easily; even the light use of a camel-hair brush may be inadvisable. In such cases the dust may be blown off. A Fletcher's foot-blower, to the outlet of which has been fitted an indiarubber tube with a suitable nozzle, is recommended for this purpose. For want of proper care, paintings have been smudged. In a picture of which only part remains, any extra lines caused by careless handling are most confusing and sometimes impossible, at little distance, to distinguish from the original. To avoid spoiling the painting during the work of uncovering, therefore, it is usually best to leave dusting till immediately before the fixative is put on.

The Protection of Wall Paintings.

Wall paintings must be protected from the action of (1) damp, (2) soluble saline matters, and (3) sulphuric acid produced by combustion gas, coal and coke.

Of these three the cure for damp walls has already been discussed in this article; and unless a wall is dry, other precautions will be of no avail. Indeed, before an attempt is made to uncover a hidden painting, the wall on which it is must be made dry.

The soluble saline matters which are damaging are principally due to the burning of gas in a building and can only be prevented from collecting by the disuse of gas for any purpose, though thorough ventilation will reduce the risk of any harm.

The fumes from coke and coal should not be allowed to enter the building, but should be led away in proper sealed flues.

When the causes of decay do not exist, the preservation and protection of old paintings is simplified.

Fixing a Wall Painting.

The surface being uncovered and the painting prepared to receive a fixative, the question of what to apply needs consideration. The condition of the wall and of the painting are the factors which rule the answer to this question. Below, preparations which have been used are described, but the results so far obtained from fixatives indicate that it is not always advisable to use them. The author himself would never attempt to fix a wall painting without first consulting Mr. W. E. Tristram, whose work at Westminster Abbey has proved his opinion to be of the highest value. A vegetable wax, diluted in a volatile spirit and applied thinly, appears to give the best results and to carry with it the fewest risks. White's Patent Spray Diffuser, with a copper receiver, is a suitable apparatus for the application of liquid preservatives. The spraying should only be repeated when the preceding sprinkling has dried. Too lavish a

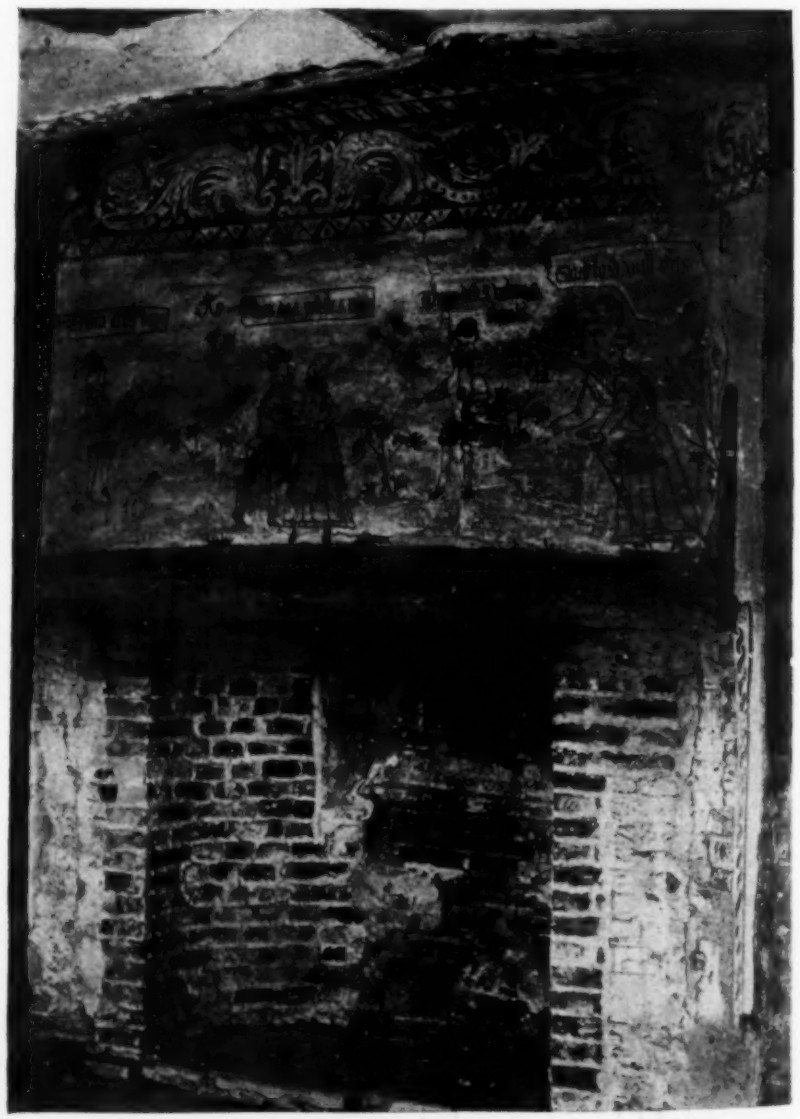


Fig. 38. West Stow Hall, Suffolk: Mural Painting.

spraying is bad for a painting; there is less danger in applying too little. The liquid should rest on the wall like condensation, and spraying should be discontinued when large drops accumulate. The operation should certainly be stopped when the surface shows a tendency to become shiny.

In cases where the wall is perfectly dry and free from saline matters, the following preparation has been used :—

25 measured ounces of pure toluol;
100 grains of ceresin;
1 measured ounce of Winsor and Newton's Picture Copal Varnish.

When used, this mixture should be applied warm. The preparation should be clear, and is the nearest approach to a varnish that it is permissible to employ.

Professor Tristram's comment on this preparation is valuable, so I add it here : "The quantity of copal varnish suggested here I have observed is enough to discolour the painting. Anyhow, it would become brittle in time and counteract the effect of the wax. A spot of linseed oil, say, less than 1 per cent., is useful, as it prevents the wax blowing."

Where the colours and ground are firm, solutions may be applied with a broad flat brush.

It is sometimes advisable to make trial on a small portion of the painting, but as most solutions are not miscible, the apparatus and brushes used for the one must not be used for another; and no part of a painting should be touched with different liquids.

Varnish, with rare exceptions, has proved disastrous to distemper paintings on plaster. One defect caused by the varnish treatment is the confining of air and gases in the porous surface of the plaster, which in a changing temperature are apt to expand and lift both varnish and painting from the wall.

There is one other point which should be mentioned in connection with paintings on plaster. When the limewash has been removed it is often the case that the old plaster exhibits a cracked and pitted surface. These faults can be stopped with fine lime plaster, which may be coloured with limewash to a tone similar to the ground of the picture. The stopping of these faults needs special care, as the new plaster used should on no account smear over the edges of the crack on to adjoining surfaces. The old plaster should not be touched with new colour, nor should any attempt be made to restore the picture in line or colour on the wall. It is interesting, however, to make restorations to full-size or to a small scale on paper, and if these are hung near a damaged or defective painting they help the amateur to realise the story of the picture.

Paintings on wood or canvas may sometimes need varnish, and then the best mastic-varnish, not copal, should be used. The surface of the painting must be clean and dry before this is applied.

The attempt to protect wall paintings by use of glass covering is rarely to be recommended, and, when attempted, the glass should be easily movable for cleaning.

EPILOGUE.

It is almost as difficult to know where to stop writing of the repair of ancient buildings as to know where to stop in actually doing the work. Many more matters relating to the subject might be mentioned.

The heating of ancient buildings is a vexed question often bringing with it the troublesome business of siting the low-level heating chamber which may cause disturbance of foundations. Particularly difficult is this matter when churches are under consideration. Often the old-fashioned use of stoves is more satisfactory than is the installation of a boiler, pipes, and radiators.

The arrangement of bathrooms in old houses and the pipes that lead to and from them is difficult; as a rule the latter should be within the house rather than set on the wall face outside.

Additions to ancient buildings made necessary by changed conditions and new uses are a matter on which a great deal might be profitably said. One school claims that the new work should be as like the old in form as may be, another that it should be modern in design and material. The Society for the Protection of Ancient Buildings holds that such works should be unobtrusive and as little noticeable as possible. Consciously modern and consciously stylistic work cannot satisfy this requirement, and it would seem that in the main the building materials and methods should be like the old, but that an imitation of the ancient style should be avoided rather than pursued.

The surroundings of ancient buildings also deserve consideration; and it would seem that the wisest course is to keep them as clear of new structures—walls, railings, or memorials—as may be. It is also probably wise when trees are being planted in such places that they be native to the country, and the same also may be said of flowering plants and shrubs.

On the whole, however, it will be seen that the best way to maintain an old building is to give it that constant attention—"daily care" as William Morris wrote it—which most people give to the houses they live in. Large building operations of the wholesale nature which were common in the last half of the nineteenth century are much less likely to be so kind to ancient work than is periodical maintenance. In fact this is the way in which the best repair works are done. Sometimes, it is true, bigger works are necessary, and it has been my object in writing these articles to show how these may be carried through without harm to a building. And lastly, let me again remind the reader that an attempt to recover or expose the original forms too often produces difficulties in regard to the replacing of missing features, and that the modern desire to carry through that attempt has led to much harm to old craftsmanship itself, or has produced those contrasts and doubts which cause all to love unrestored cottages or churches by contrast; indeed, it was the dislike of wholesale restoration which moved me to write these articles, and which fifty years ago impelled Wm. Morris to form the Society for the Protection of Ancient Buildings.

(*Concluded.*)

DECORATIVE SCULPTURE*

QUITE apart from its educational value this is a very pleasant book to handle, for its fine paper, type and illustrations in an appropriate binding. The thirty-six pages of text are printed on "Antique" paper from a rather heavy old-faced type, quite easily read, with nice wide margins. There are 320 plates, on art paper, of illustrations from photographs running from one to four to the page, giving us, say, 600 or more examples of decorative sculpture, ranging from Ancient and Middle Empire Egyptian (5000 B.C. or earlier) to Italian Renaissance of the sixteenth century A.D., with Byzantine, Greek, Roman, Early Christian schools, Coptic, Romanesque, Gothic, and Islamic of the various centuries in between. It is a Gargantuan feast of illustration, but *per contra*, the text rather inclines to the meagre diet. Accepting it as an "introduction" we find little to complain of in the quality. The author has a fine scholarly grasp of his subject and the English language, and we can only wish he had given us more to read and think about.

In the first section, Egyptian and Near Eastern, we should like to see some historical reference to plate 1, "Ancient Empire—Head of a Statue of King Khafra with Falcon," now housed at the Cairo Museum; but we find no direct reference to this or any plate earlier than No. 18, showing a bull and a dragon, two of the five hundred of such, flanking the portals of the Ishtar Gate at Babylon. Plates 20–25 show us plainly—and here the text is helpful—that the ancient Assyrians were not only mighty hunters but that their artists, with every opportunity for observation in the great animal parks, have never been surpassed in their renderings of animals in motion.

In the final section, "Islamic Ornament," we have 30 plates (comprising 65 figures) which are dealt with textually in a page and a half, in which but fourteen actual references are made to the figures illustrated; the remainders are left to speak for themselves and they do so admirably.

As both illustrator and writer are dealing with applied ornament—decorative sculpture—we do not expect a full exposition and historical criticism of the various schools and phases of architecture *per se*; but the author does not entirely ignore the purely architectural question, and he gives many suggestive passages in his text, even though we do not always agree with him in his conclusions. His short dissertation on Gothic sculptural ornament is useful and full of suggestion, *e.g.*, "The Gothic statue only serves decorative purposes, whereas Egyptian plastic art was of symbolic signification, Early Christian Byzantine mystical, Near Eastern laudatory, and Greek an object in itself. Even when Greek plastic art is an auxiliary to architecture it retains its individual and independent traits. Its style is in no way connected with that of the temple, and it is by no means a subordinated member. Now, Gothic figures are not conceived as such independent works of art, with perhaps the exception of those on the tympanum they are only part of a whole, merely ornaments, and are subordinated to the architectural requirements of the edifice (plate 221)." The reference given is to the fourteenth century equestrian statue of Saint Martin on the facade of the Minster at Bale. This, like the corresponding figure of Saint George (plate 220), is certainly an independent work of art, and has no relation to architectural requirements, and we should have thought that the same might be said of the Biblical stories we find on the Gothic tympani; but to say that the Gothic statue only serves decorative purposes is to miss the whole substance and spirit of Gothic statuary ornament. Take away the hundreds of statues and figurines from their niches on the western front of Amiens Cathedral and the façade would not fall to the ground, nor from a distant point of view would its architectural aspect be materially altered; but where would be that "Bible of Amiens," that veritable sermon in stones which we know so well?

Herr Köster is to some extent happier in another suggestion *re* Gothic statues: "Their position not only required the perpendicular line to be emphasised, but that the sculptor should be under certain restrictions as to the bearing and attitude of his figures. Hence gesticulation was restrained and the face alone afforded unrestricted scope for interpretation of individual features and expression. And herein lies the great forte of Gothic plastic art. The heads are mostly of high artistic quality. (Plates 208, 210, 211.)" Now plate 208, heads on Reims Cathedral and Notre Dame at Paris, certainly supports the last point in the quotation; but 210 and 211, two fine prophets at Reims, are entirely opposed to any suggestion of perpendicular emphasis, sitting, as they are, in pensive head-on-hand attitudes. Plates 191 and 215, doorway figures at Amiens and Saint Denis—the latter transitional from Romanesque to Gothic—would support the idea of perpendicular emphasis if, indeed, it is safe to argue from the particular to the general. The Gothic sculptor did not work in watertight compartments, and it is impossible to generalise with safety on his vivid imagination.

* "Decorative Sculpture." Selected by Georg Kowalczyk, with an introduction by August Koster, of the State Museum. Berlin. London: Ernest Benn, Ltd. 4to. Cloth, gilt. £2 2s. nett.

Magdalene College, Cambridge: New Quad.

Funds are being raised to provide for the new Court Quadrangle of Magdalene College, upon which it is hoped to start work soon. The cost is estimated at £60,000. The architect will be Sir Edwin Lutyens, R.A., Queen Anne's-gate, S.W.

ILLUSTRATIONS

Peterborough Town Hall.

We illustrate this week the R.A. perspective drawing of this building. The design was awarded first place in a recent competition. Mr. E. Berry Webber, A.R.I.B.A., is the architect. The competition drawings were published in our issue for March 16, 1928.

Junior Boys' Hostel, Lord Wandsworth Agricultural College.

This is a simple, straightforward design in brick and tile, relying for its effect on its general proportion and grouping, without any ornamentation whatever beyond the stone dressings to the entrance doorway and the little wrought-iron balconies to the windows at the ends of the two projecting wings on the north and south elevations.

The general contractors are Messrs. T. H. Kingerlee and Sons, of Oxford, the bricks are multi-coloured, hand-made facing stocks by the Shelly Brickfields, near Horsham, and the roof tiling is sand-faced, flat-and-roll Italian tiles by Messrs. Ames and Finnis. The internal plumbing and drainage, heating and domestic hot water is being carried out by Messrs. Dent and Hellyer, and the electric light by Messrs. Waring, Withers and Chadwick.

Mr. E. Guy Dawber, A.R.A., P.P.R.I.B.A., is the architect.

Chester House, Clarendon-place, W.

We give in this issue two views of Sir Giles Scott's own residence, Chester House, Clarendon-place, W., designed by himself, and which has just been awarded the R.I.B.A. London Architecture Medal for 1927. The house was fully illustrated in our issue for October 15, 1926.

Highams Park Telephone Exchange.

This building is a characteristic example of the dignified type of official building, designed with a regard for traditional character, which is now being produced by H.M. Office of Works. Mr. John H. Markham, F.R.I.B.A., is the architect.

Manchester Municipal College of Technology Competition.

The winning design in this competition by Messrs. Bradshaw Gass and Hope, FF.R.I.B.A., was illustrated in our last issue. This week we publish the second premiated design, by Mr. Frank Lishman, F.R.I.B.A.

The Samuel Augustine Courtauld Institute of Bio-Chemistry, Middlesex Hospital.

This new building, opened on June 14, really consists of two distinct portions. The first portion, consisting of the basement and sub-basement, is given over to hospital uses; the sub-basement contains the central boiler-house and engineering plant for the hospital and all other buildings; the basement contains the connecting corridors and subways to the hospital, annexe, and the nurses' home. From the ground floor upwards the second portion is the Institute of Bio-Chemistry. The ground floor provides a restaurant for students, with its own kitchen, etc. The first floor is planned as one large laboratory for students with a preparation room and store. The second floor contains a clinical routine laboratory with three examining rooms attached. The secretary's office is on this floor, near the staircase and lift, and this floor is also connected to the Bland Sutton Institute on the hospital site by means of a reinforced concrete bridge across the street. The third floor contains a large chemical laboratory with combustion and balance rooms, and at the end a large scale preparation room. The fourth floor is planned to provide a library, optical dark room, experimental laboratory, the professor's private room and laboratory. The fifth floor is planned to allow for some extension as to half the area: the remaining portion is divided into two large animal houses, with a small incinerator room attached.

When planning the various laboratories it was decided to keep them as large as possible, first to give better means of supervision, and secondly to take full advantage of the cross lighting and ventilation; the result generally has been to provide very well-lit and airy laboratories.

Structurally, the building throughout is a steel-framed one; the boiler-house is about 27 ft. below pavement level, and is in a water-tight tank of asphalted reinforced concrete. The water level is about 5 ft. above sub-basement floor level all round the building. To overcome the difficulty of providing a space in the floor for all the drainage from the benches, the constructional floor slab was placed at the bottom of the main steel beams, the space above and between the beams being used for all pipe ducts. A further advantage gained by this means of construction was flat ceilings everywhere.

The heating is by low pressure hot water, the pipes running round the various rooms about 2 ft. below ceiling level, some rooms, such as the animal houses, being heated by steam. The overhead pipe system was adopted, after considerable discussion, as it was practically impossible to find suitable positions for radiators owing to the benches, etc. Two electric push button lifts are provided, one in the main staircase, for passengers, and one for goods and food lift in the escape stairs: both serve all floors.

The laboratories are fitted up very carefully, every bench and its detailed fittings having had minute consideration. All services such as hot water, cold water, both tank supply and high pressure, gas, steam, electric light and power are provided wherever required. The drainage system from the various benches and isolated sinks was governed by two important considerations: (1) The possible deterioration through chemical action of the material employed, and disturbance of jointing by vibration, use, etc.; (2) The necessity to prevent as far as possible any trouble from fouled waste ducts in the rooms or the building itself. With regard to the first point, it was decided to use chemically pure lead in the form of pipes; these were laid in one piece from end to end, with all joints carefully welded. The pipes were laid to a gentle fall in shallow concrete channels lined with asphalt, as an additional safeguard against possible leakage. These asphalt channels have an iron sleeve protruding through the external wall, to act, first, as a warning pipe should a leakage occur, and secondly, to form a way, through which the main waste pipe goes to connect up with the main iron stack pipes. Careful arrangements are made to keep these main stacks fully ventilated and easy of access at each connection. The horizontal lengths of pipe under the floors are reduced to a minimum; wherever possible they are arranged under the benches themselves, and well above floor level, thus making them easy of access.

With regard to the second point, this is dealt with by introducing laboratory traps to every isolated sink or group of sinks on each bench, thus forming an effetual barrier, and at the same time intercepting all discharges and helping to break down strong mixtures before they find their way to the lead pipe work. All soil drainage is taken separately to main external stacks.

The arrangements in the two animal houses were given special consideration; the floor is asphalt, walls distempered, and all cage racks are suspended from the ceilings, thus making the cleaning of the floors a simple matter, and also helping to prevent vermin from getting to the animals.

All the laboratories have white glazed brick walls, casement windows with opening fanlights, and deal floors on wood joists. Some of the smaller rooms have either a granolithic or an asphalt finished floor. All woodwork is stained and dull varnished. Generally, everything has been kept as simple as possible.

Referring again to the boiler house, the plant installed is a very big one, and consists of four large boilers of the economic dry-back type fired with oil from four large oil tanks under the pavement. The main chimney stack built in reinforced concrete is some 130 ft. high. The building has been erected complete in 18 months.

Mr. T. J. K. Kierman, of Victoria-street, as consulting engineer, was responsible for the boiler installation, and the heating, hot water, electric lighting and lifts. Dr. Oscar Faber was responsible for the designing of the steelwork and all the reinforced concrete, including the retaining wall, raft, and main chimney shaft.

Mr. Alner W. Hall, F.R.I.B.A., was the architect.

Following is a list of the principal firms employed in carrying out the work:—General contractors, Messrs. Holland & Hannen and Cubitts; heating and hot-water scheme and electric lighting, H. J. Cash and Co.; boilers supplied by Davey, Paxman and Co., Ltd., and erected by James Slater and Co.; Etchells, Congden and Muir, lifts; Dent and Hellyer, drainage and plumbing; Finch and Co., sanitary fittings; Stuarts Granolithic Co., reconstructed stone; White and Co., oil burning plant; Diespeker and Co., terrazzo floors; Luxfer Glazing Co., pavement light and lantern; J. F. Ebner, teak and wood floors; Comyn Ching, ironmongery; Benham and Sons and Gas Light and Coke Co., cooking apparatus; Val de Travers and Co., asphalt; Dorking Brick Co., facing bricks; Sneyd Collieries, white glazed brick and partitions; London Hydraulic Power Co., high pressure water; the Gas Light and Coke Co., gas supplies; Messrs. White, of Bedford, doors; Norris & Co., escape stairs.

"Briarcombe," Bournemouth.

This bungalow was recently built for the architect. It occupies a delightful position facing south-east, at the upper part of the avenue. It is built with 12 in. cavity walls, rough-cast with Swanage pebbles above a red brick plinth. The accommodation provided is shown on the plan. All the bedrooms have lavatory basins, and the hot-water system is fitted with a "Hydresse" stove. The windows are all leaded lights, and those required to be opened have metal casements. The others are fixed direct into the frames in the old way.

The general contractors were Messrs. F. W. Burton and Son, of Winton, Bournemouth, and the architect was Mr. Horace Dan, L.R.I.B.A.

MEETINGS

SATURDAY, *June* 16.

Association of Architects, Surveyors, and Technical Assistants. Annual Meeting, 28, Bedford-square, W.C.1. 3.30 p.m. Annual Dinner, Holborn Restaurant, W.C.1. 7 p.m.

MONDAY, *June* 18.

Royal Institute of British Architects. Presentation of the Royal Gold Medal to Mr. E. Guy Dawber, A.R.A. 8.30 p.m.

WEDNESDAY, *June* 20.

Northern Architectural Association. Annual Meeting. 7.30 p.m.

WEDNESDAY-SATURDAY, *June* 20-23.

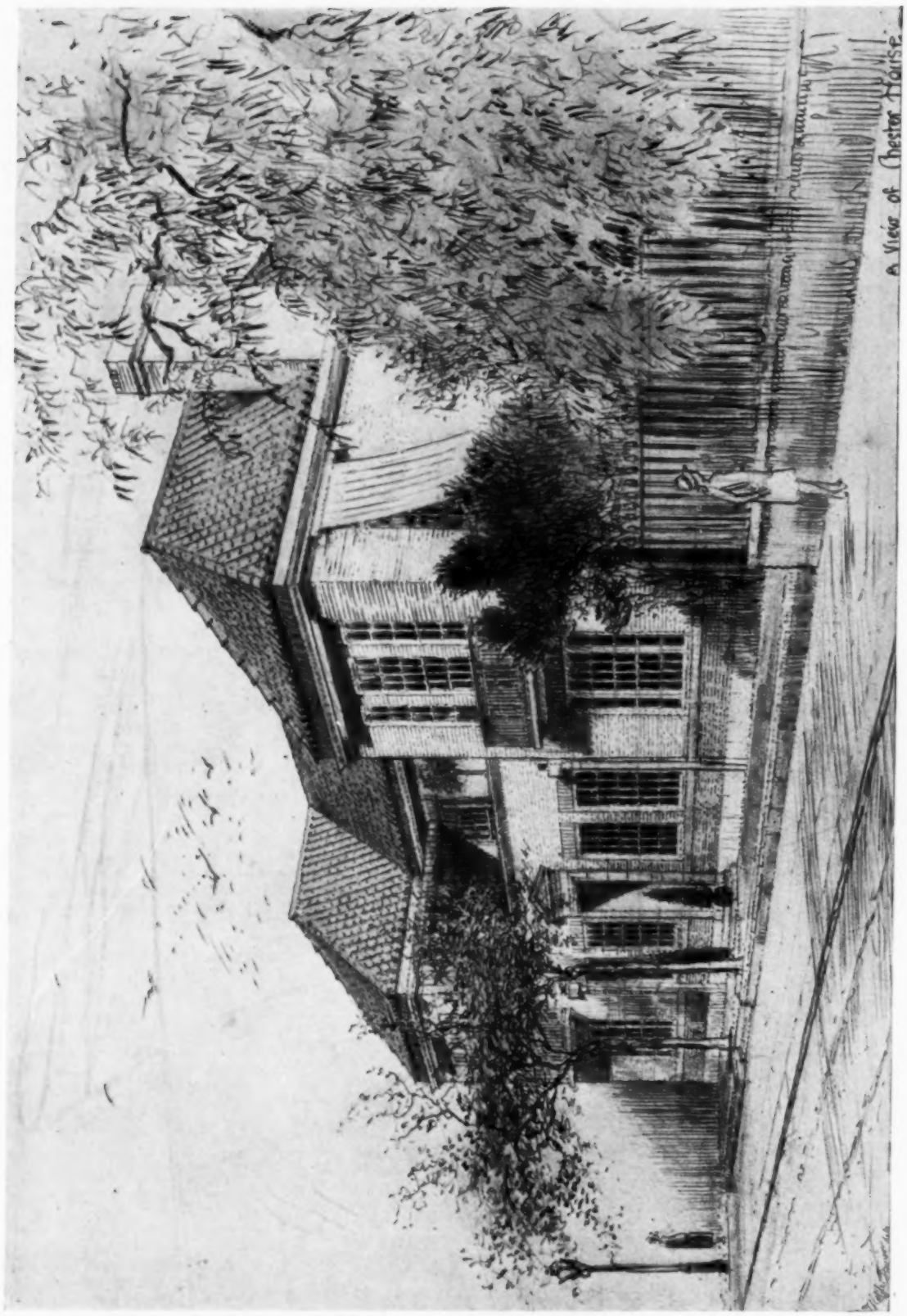
Royal Institute of British Architects' Conference. At Bath.

Institution of Municipal and County Engineers. Annual General Meeting and Conference.

Building Science Abstract.

No. 4, Vol. 1 (new series) of Building Science Abstract, issued by the Department of Scientific and Industrial Research, has now been issued (price 9d.) by H.M. Stationery Office It contains extracts from papers read all over the world on the following subjects:—Stone, mineral earths, clay and ceramics; lime, plaster and chemical compositions in general; concrete and cement; metal; organic building materials; paint and varnish; materials in general, their properties and testing; elements of structures; housing and domestic engineering; and specialised construction.

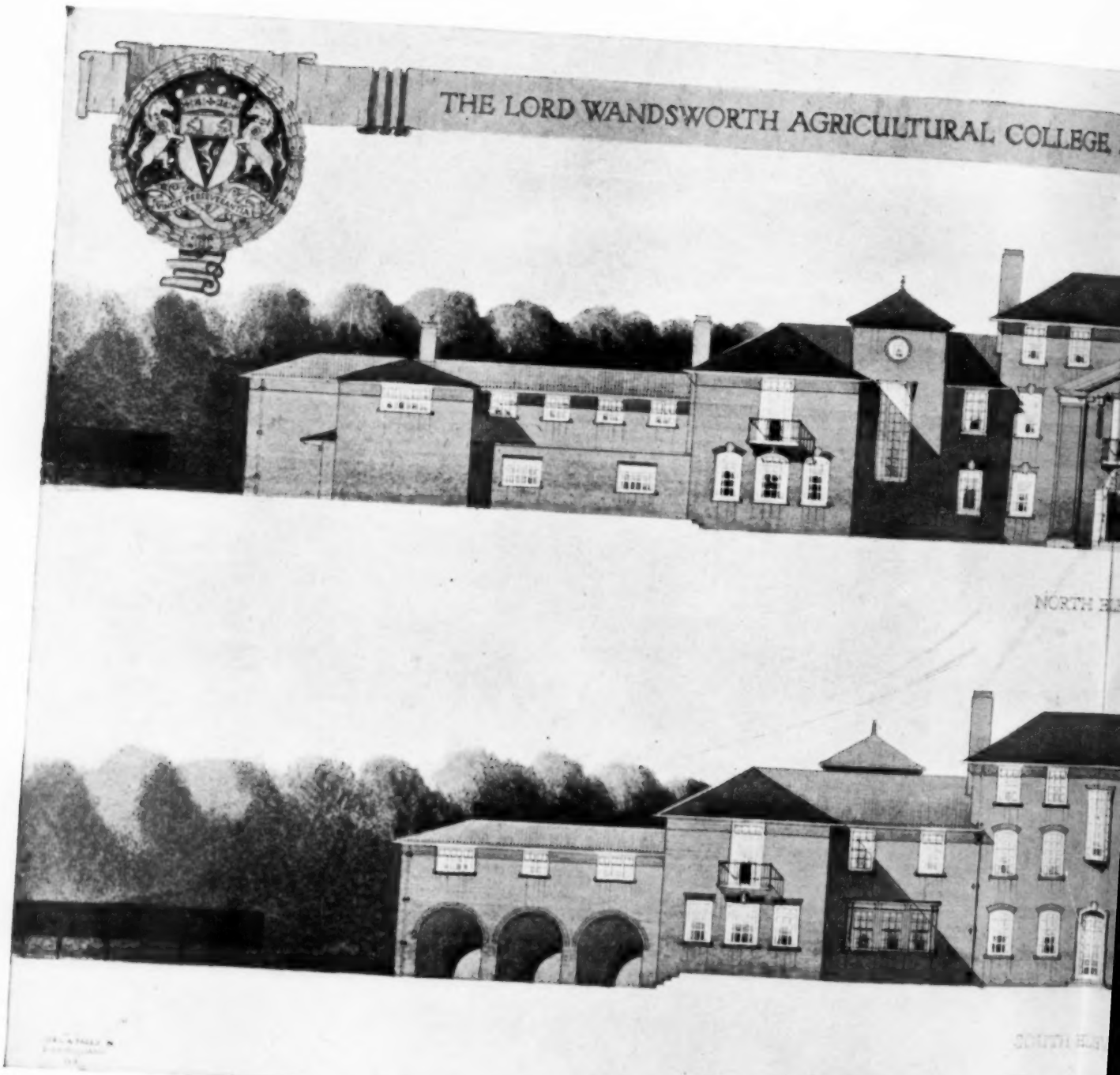
UNIV. OF MICH.



Chester House, Clarendon Place, W.

(Awarded the R.I.B.A. London Architecture Medal, 1927.) SIR GILES GILBERT SCOTT, R.A., F.R.I.B.A., Architect.

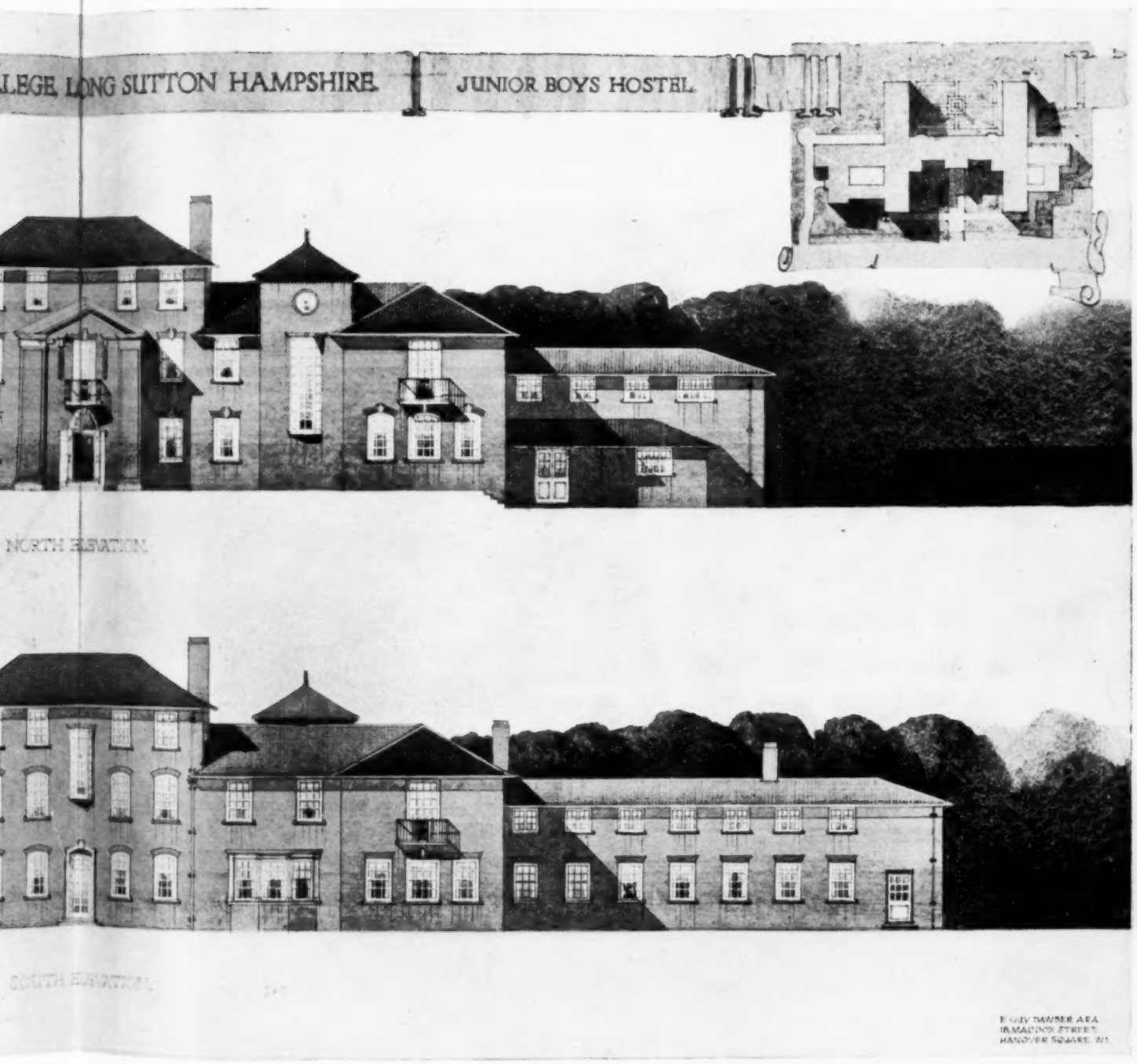
UNIV. OF WICH.



R.A. Exhibition, 1928.

THE LORD WANDSWORTH AGRICULTURAL COLLEGE, LO

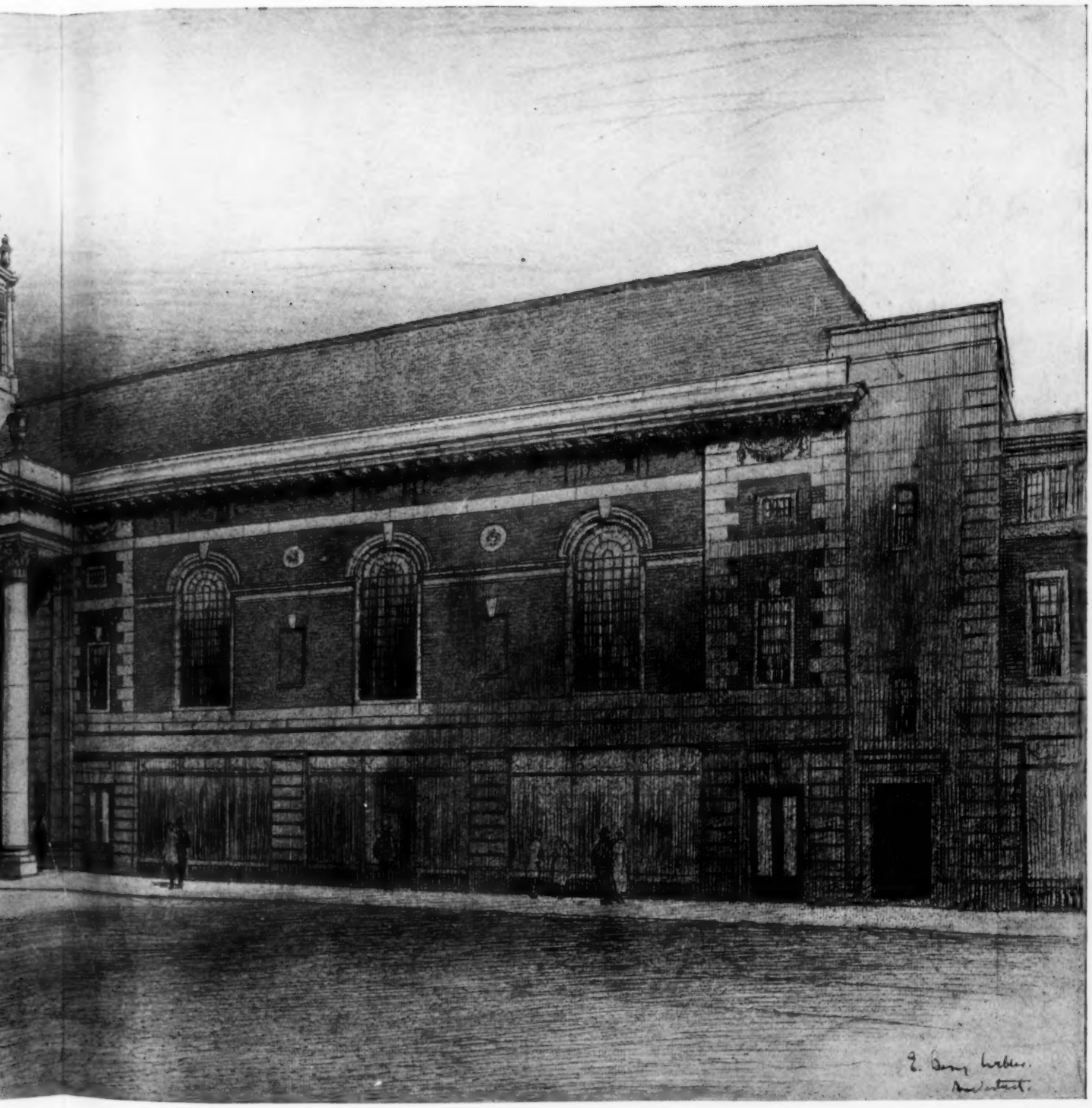
[Mr. E. Guy Dawber, A.R.A.,



AL COLLEGE, LONG SUTTON, HAMPSHIRE: JUNIOR BOYS' HOSTEL.
wber, A.R.A., PP.R.I.B.A., Architect.

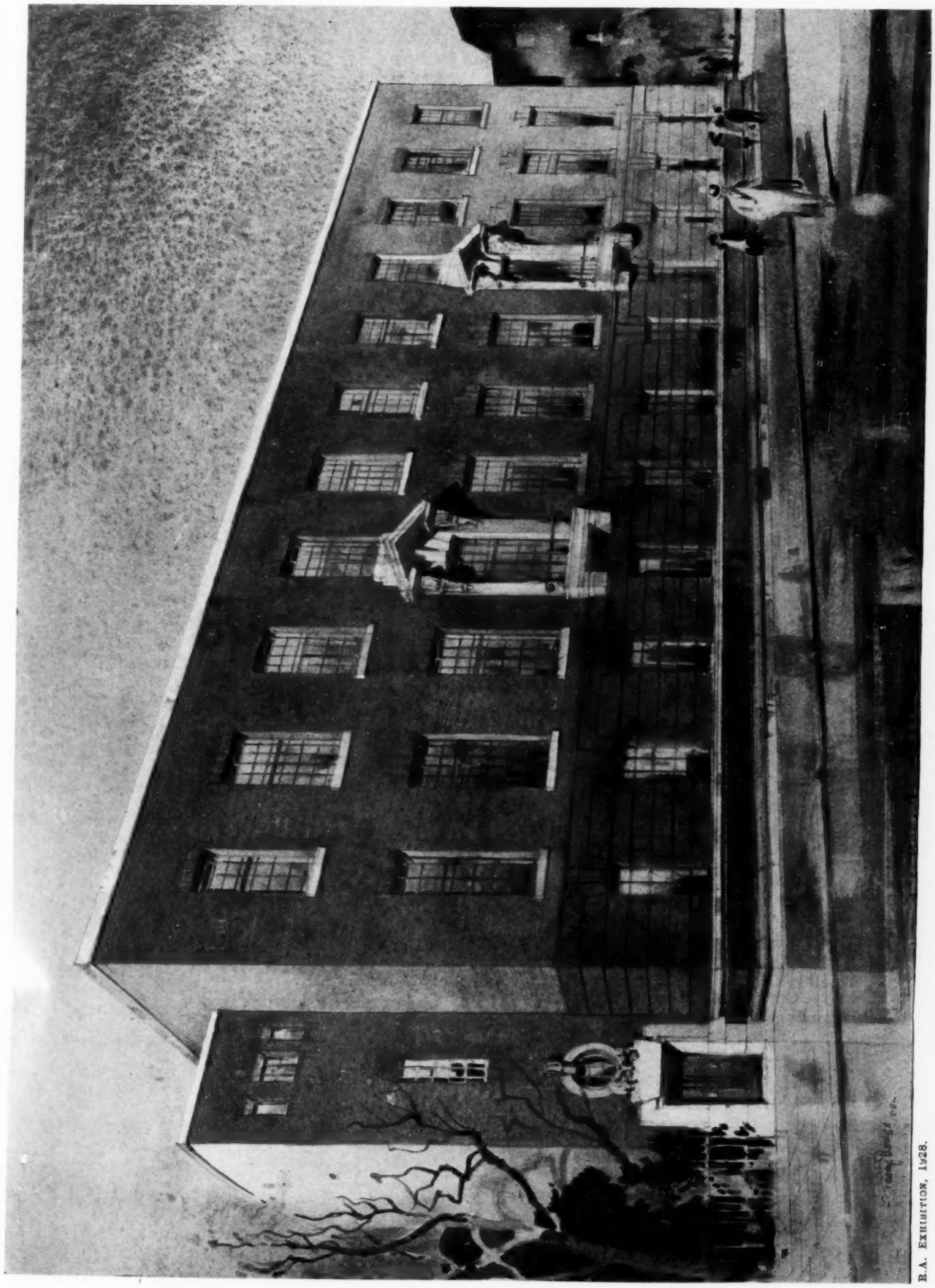
R.A. Exhib.tion, 1928.

NEW TOWN HALL AND SHOPS
Mr. E. Berry Webber, A.R.I.



HALL AND SHOPS, PETERBOROUGH.
Webber, A.R.I.B.A., Architect.

UNIV OF MICH

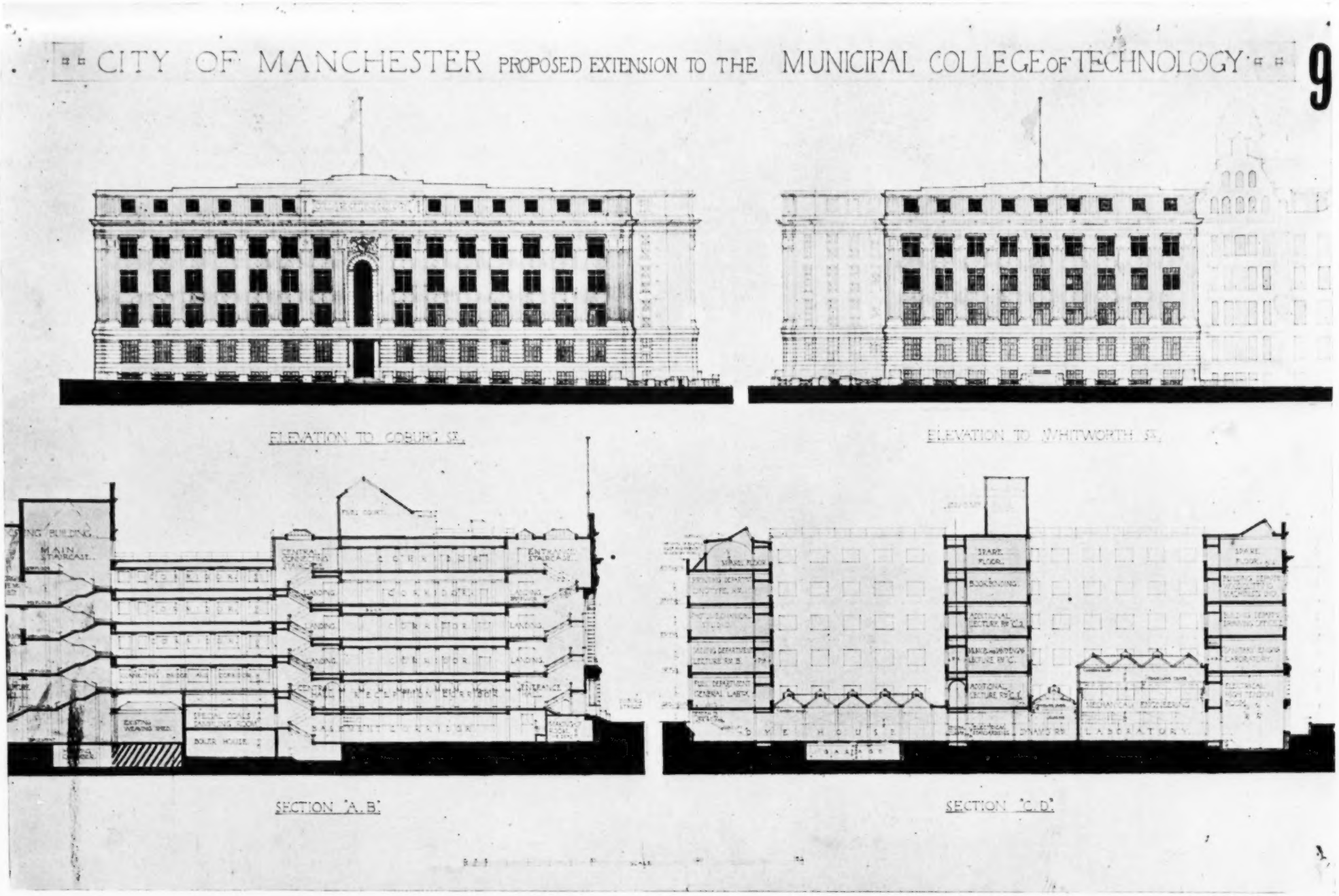


Higham's Park Telephone Exchange.

MR. JOHN H. MARKHAM, F.R.I.B.A., Architect (H.M. Office of Works).

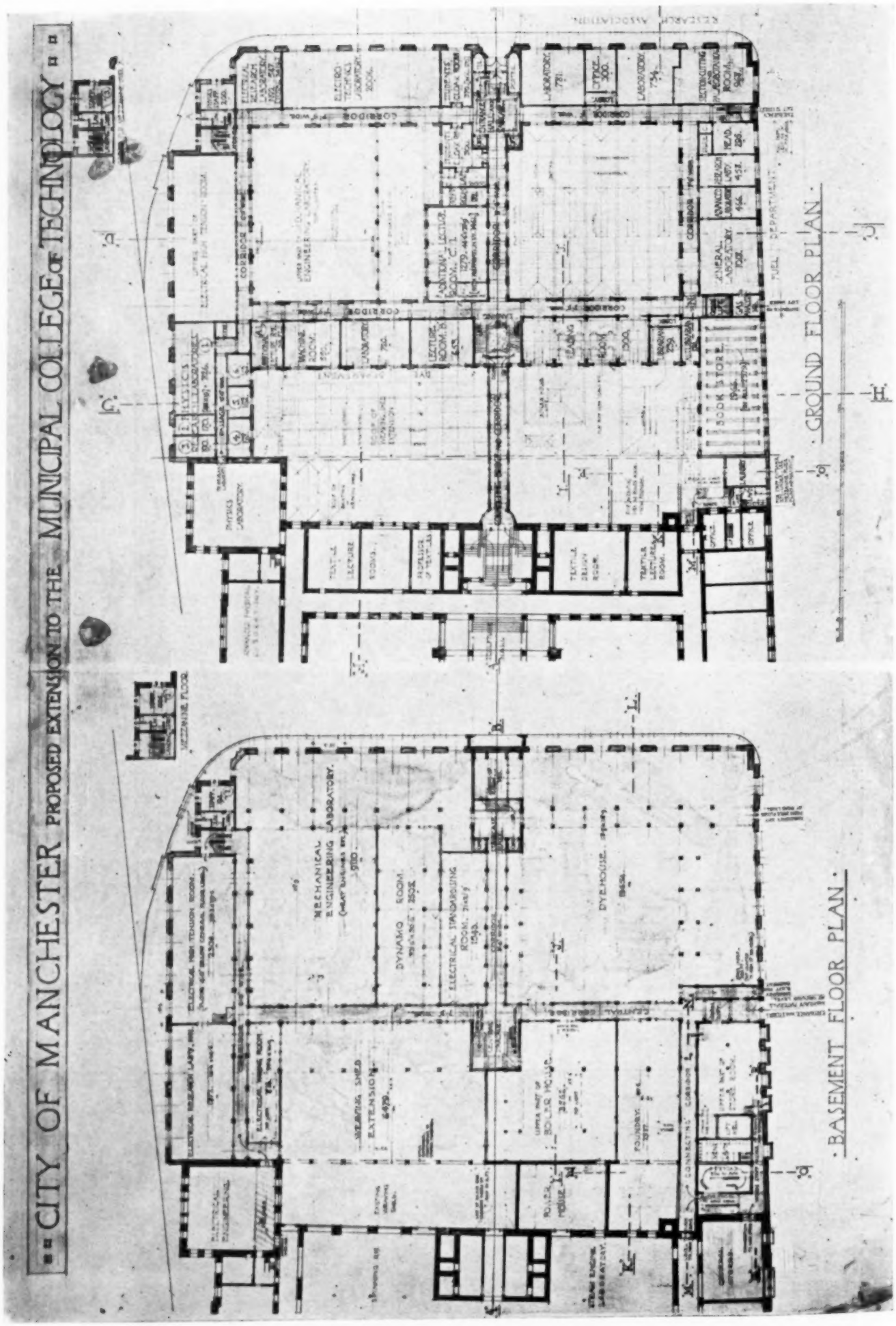
R.A. EXHIBITION, 1928.

UNIV OF MICH.



Manchester Municipal College of Technology. Competition for Proposed Extensions : Second Premiated Design.

By Mr. Frank Lishman, F.R.I.B.A.



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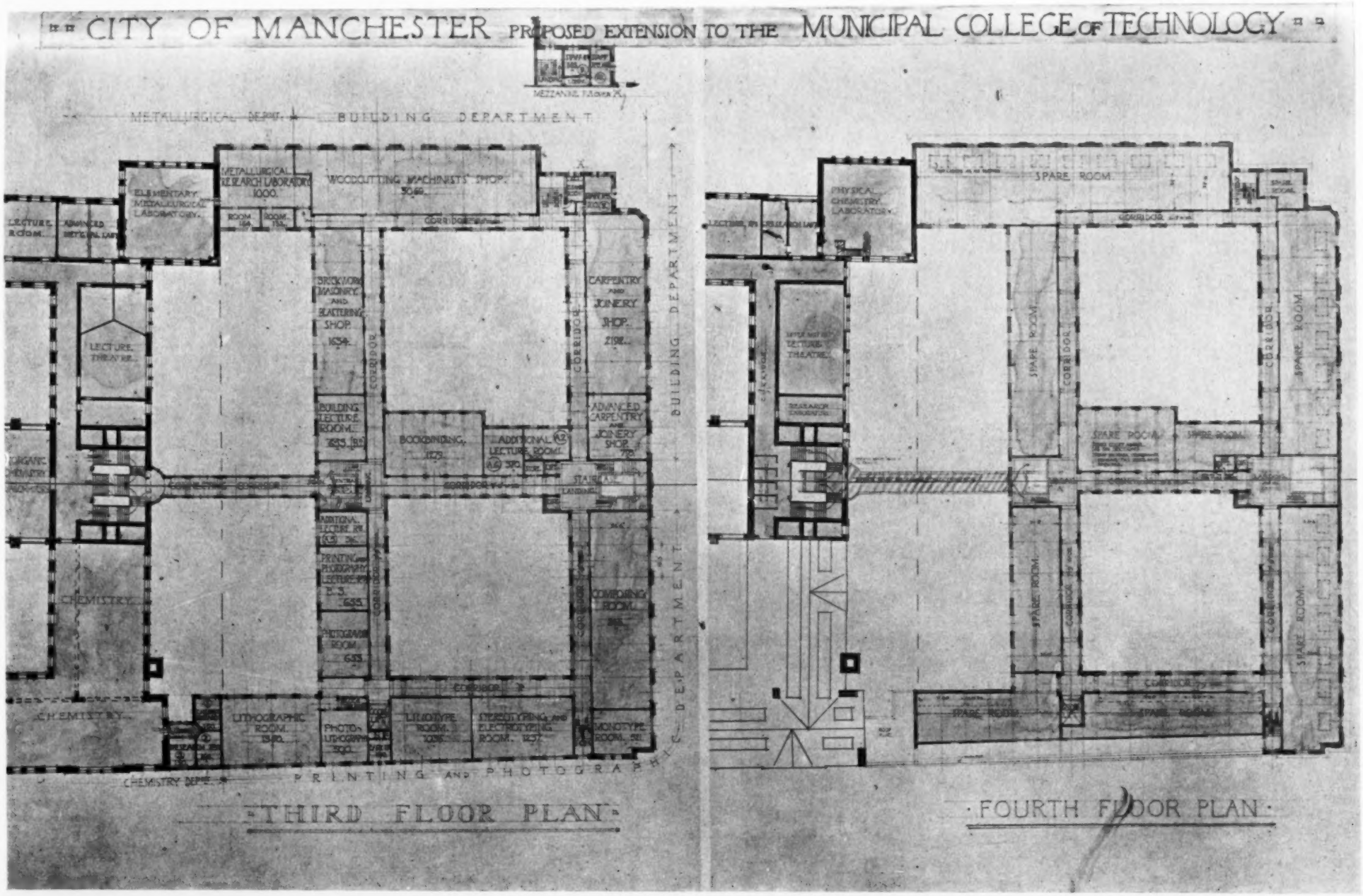

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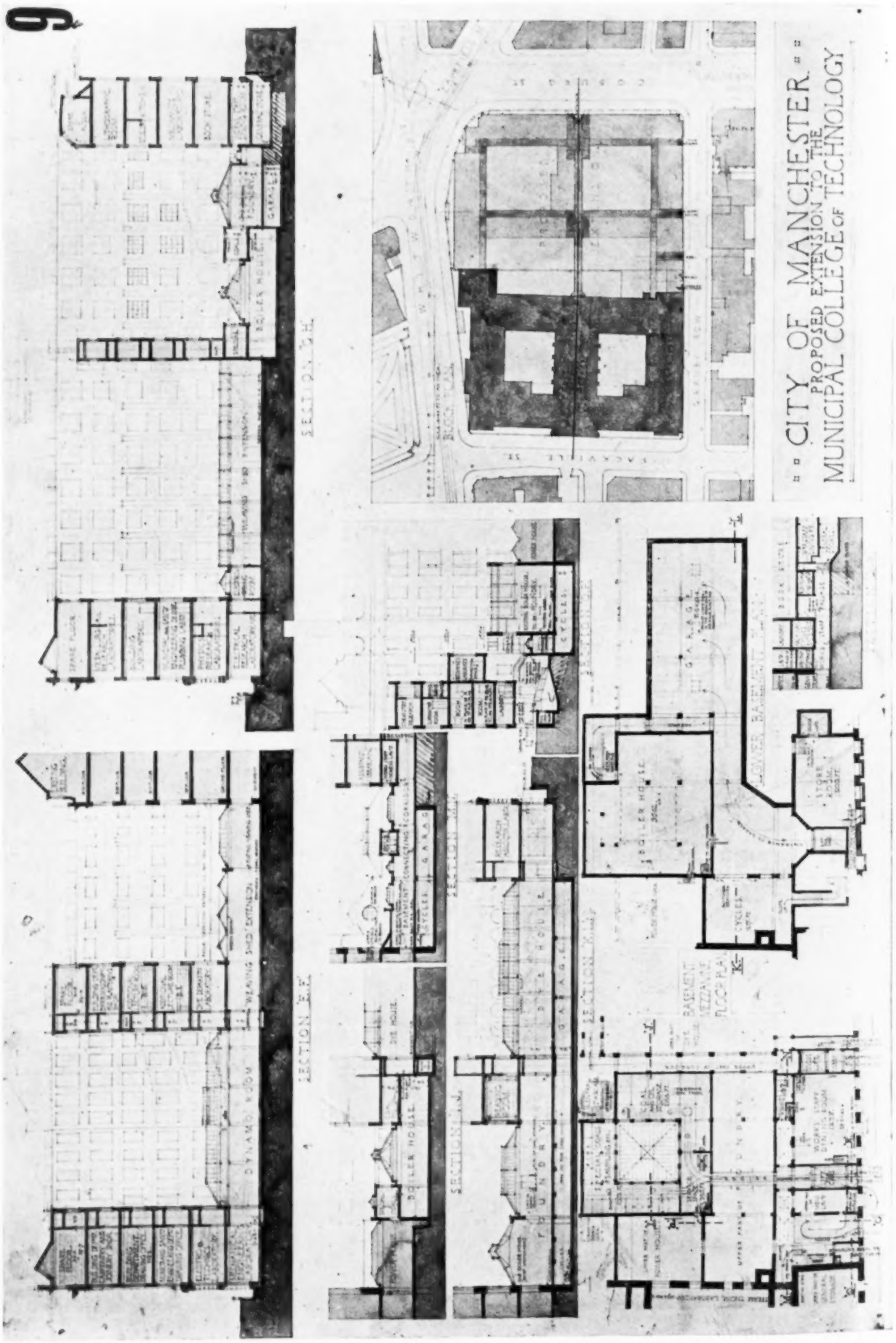

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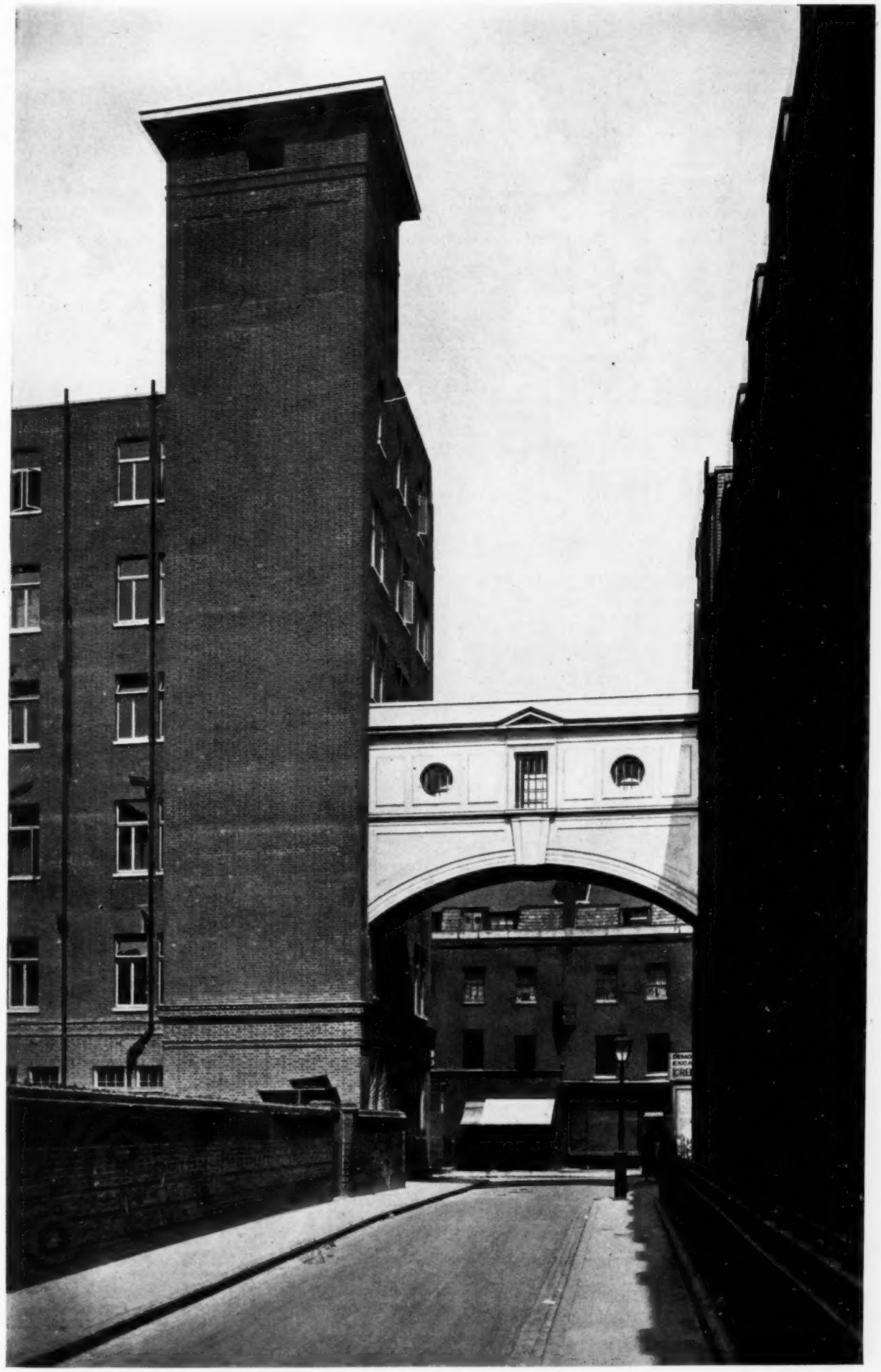
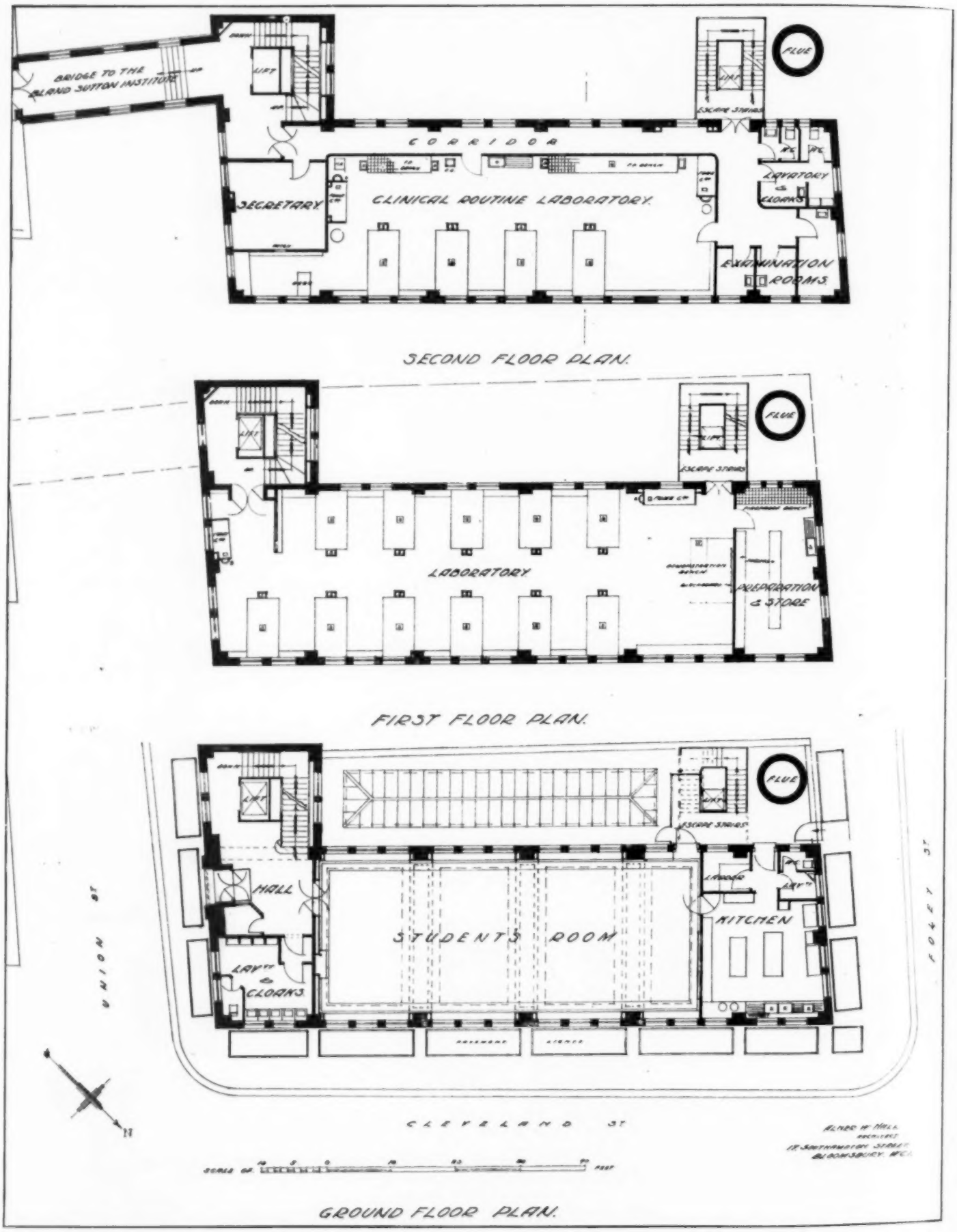


Photo: Humphrey Joel.

The Samuel Augustine Courtauld Institute of Bio-Chemistry, Middlesex Hospital.

Mr. Alner W. Hall, F.R.I.B.A., Architect.



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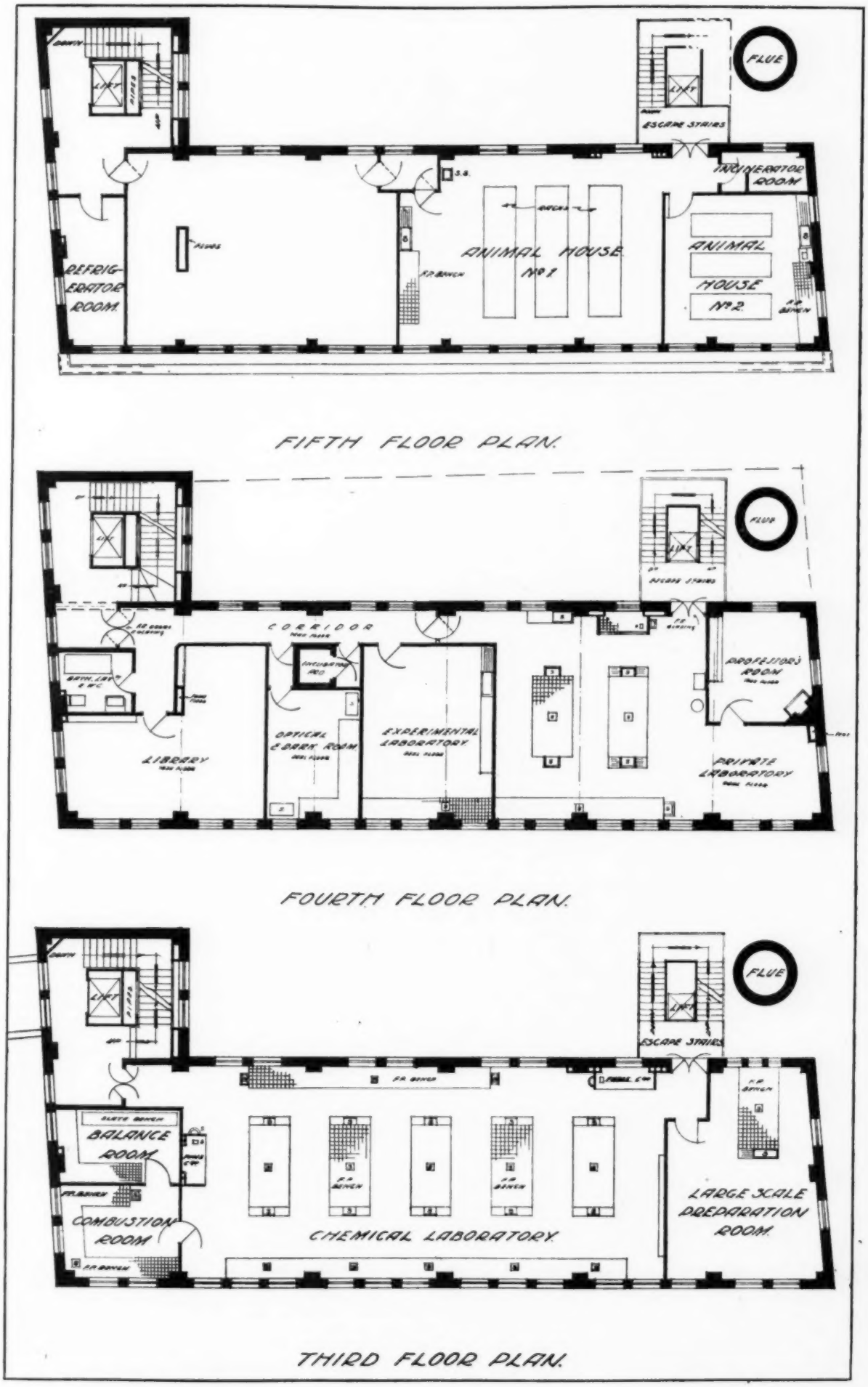

The Samuel Augustine Courtauld Institute of Bio-Chemistry, Middlesex Hospital.

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SOME ROMAN MONUMENTS IN PROVENCE

By F. T. BAGGALLAY, F.R.I.B.A.

The following notes result from a recent visit to the old Roman province.

One of the less known Roman monuments in the South of France is the little hexastyle peripteral Corinthian temple at Vienne. On the very uncertain evidence of rivet holes in the front frieze it is supposed to have been dedicated to Augustus and Livia. The holes, as a matter of fact, would have served for fixing a good many different combinations of letters; and the only real excuse for attributing it to an early date is its comparative plainness and the absence of that excessive ornamentation characteristic of the second century. The forms and execution of the architectural details are good, especially for a provincial monument, but include nothing indicative of date. The main peculiarity of the temple is the return of the back wall into the first intercolumniations of the side porticos, square pilasters being substituted for the columns there. Two recesses at the ends of the wings are thus formed for statues. The depth of the building in proportion to its width is rather small, less than three to two; and as the front portico is three columns deep, the cella is a very small one. Deep drill-holes and sharp, deep carving in two or three of the capitals suggest restoration under byzantine influence. In mediæval times the temple was used as a church, and the intercolumniations built up. It was very thoroughly restored in 1885.

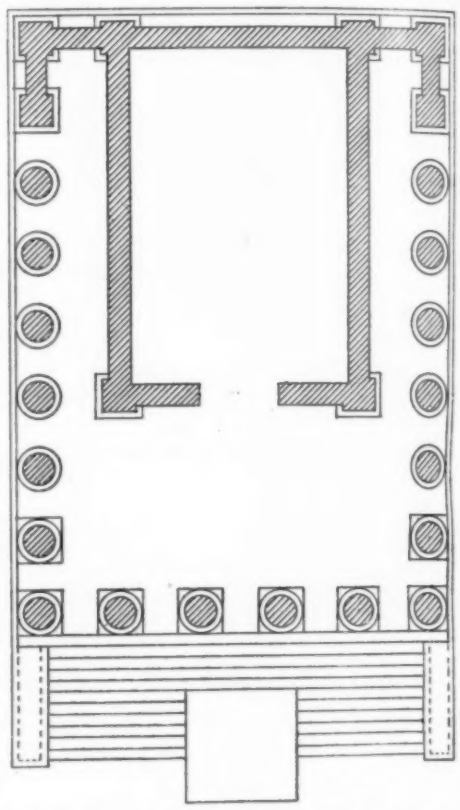
There are a number of other remains of Roman work in Vienne, mostly fragmentary, but some of them deserving of more investigation than would be possible without the destruction of later buildings. In particular there are, some little way east of the temple, and farther up the hill-side on which the town is built, a coarsely detailed and much ruined two-way arch, probably the end of a portico, and beyond it a piece of heavy rusticated Roman walling, stepped up at the top to mask the rising hill outside. These are regarded as remains of the forum: but if there was a forum here it can hardly have been the principal one: it is too far from the river and the centre of the town. The civic forum was probably in front of the temple, where paving has been found, and to which, and to adjoining buildings, the architectural fragments now deposited within the railing round the temple may have belonged. The large open space on the north side of the cathedral church of St. Maurice, in all probability, marks the site of the chief commercial forum. It is close to the river, the main avenue of communication with the outer world; there is Roman masonry in the adjoining wall of the church and the ruins of what is probably a Roman arch at the entrance to the place from the town.

The nave of the Romanesque church of St. Pierre, now used as a museum, was evidently a large Roman hall with an apse, no doubt a basilica. The building is attributed to the fifth century, apparently because the walls are of rough rubble. But that is not necessarily a sign of late date: they were, of course, stuccoed over. The hall has been converted into nave and aisles by the insertion of two rows of very tall piers and arches, and contains, like other museums in the province, numerous pieces of Roman sculpture and architectural details such as capitals, funerary altars, cippi, drums of columns, etc.: but their provenance is, as usual, rarely noted. A barbarous monument in the extreme south of the town is locally called the tomb of Pilate, though attributed to the fourth century. The pedestal is a coarse, ill-proportioned four-way arch, with columns at the corners, possibly unfinished, surmounted by a Doric entablature, out of proportion as a whole, and in detail, above which is a tall pillar of a form between those of an obelisk and a pyramid. It is said, on what grounds is not stated, to have been the central ornament on the spina of a circus. It seems quite likely it was so: but in that case the spina wall must have been represented, as in some other cases, only by a line of posts and monuments. The local name is evidently based on the statement of Eusebius that Pontius Pilate, on his return from Palestine, was exiled to Vienna; a statement that has given rise to other equally absurd local legends.

Students of Roman architecture will probably find it difficult to accept the date most recently assigned to the well-known triumphal arch at Orange. Professor Bury must be referring to it when he says: "A triumphal arch was erected at Arausio (Orange) to commemorate the defeat of Sacrovir."* And Dr. Ashley says: "The beginning of an inscription in honour of Tiberius has been made out."†

One might well hesitate to doubt such authorities: but in view of the architectural character of the monument, on which it has hitherto been assigned to the late second century, one may be excused for wondering whether the authority on which Professor Bury made his statement is beyond question, and how the inscription to Tiberius was made out. If it was a reading from rivet holes, such readings have before now been proved mistaken. Dr. Ashley regards the pediments of the arch as indications of early date: but against them may be set, not only its profuse ornamentation, but also the introduction on the ends of a decoration evidently derived from a constructive feature not known to have been used before about 151 A.D., namely an arch under the pediment over the middle intercolumniation. In addition, no other three-way arch of early date is known. The decoration, with trophies of arms and figures of chained prisoners, is singularly appropriate on a triumphal arch. The representation of chained captives seems inhuman to us, but such an idea would not have occurred to the ancients. Similar figures are to be seen on the arch near St. Remi, and on that at Carpentras, only a few miles away; but apparently nowhere else. On that ground it has been suggested that the three arches are contemporary and commemorate the same victory: but such a deduction hardly seems justified; imitation of one by the others no doubt accounts for the peculiarity. The figures at Carpentras are in a far better state of preservation than the rest. One seems to be a Roman, the other a barbarian. What the structure to which they are chained represents is rather a mystery. Something ought to be done to allow this arch, or perhaps one should say what there is of this arch, to be better seen. It stands surrounded by the high walls of a courtyard of the Palais de Justice, so small that one can hardly get round it, and cannot at all get a fair view of it.

Carpentras (Vaucluse) Arc de Triomphe, Cour du Palais de Justice.



Sketch Plan of Temple at Vienne.

It is difficult to understand why the so-called temple of Diana at Nimes should be now regarded as a nymphaeum. The principal requirements of vegetable life are air and sunlight, and for these the interior must have depended upon the doorway, for it is inconceivable that there was an hypaethral opening in the vault and the roof over it. It must certainly have been a temple, though not of any of the old Roman gods. The screened-off aisles communicating only with lateral cells at the inner end rather suggest that it was a temple of Serapis. There was a passage round the building above the side vaults and in the thickness of the east (entrance) wall, which was probably completed by passing over the cells at the west end. Altogether the arrangements would have been convenient for the production of mysterious effects calculated to stimulate fervour in the worshippers. The construction and decoration of the building point to the third century as the period of its erection.

Of the two most imposing Roman monuments in the province, the amphitheatres at Aries and Nimes, the latter is a few feet the smaller and externally simpler; that is the applied orders of the two stories at Nimes are both Doric, pilasters below and columns above, while at Aries both orders are columns, Doric below and Corinthian above. At Nimes, too, the outer and inner arches of the upper story are not concentric, a very noticeable defect which was avoided at Arles.

Taking into account the eternal emulation between cities, all this goes to support the antecedent probability that the Nimes ex-

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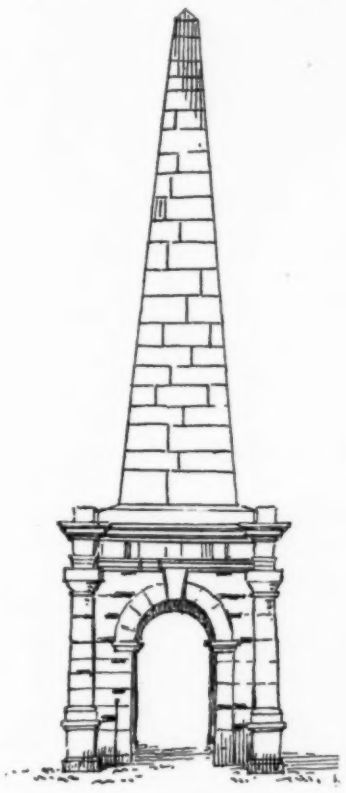
* *Students' Roman Empire*, p. 184.

† *The Architecture of Ancient Rome*, revised by Thomas Ashley, p. 115.

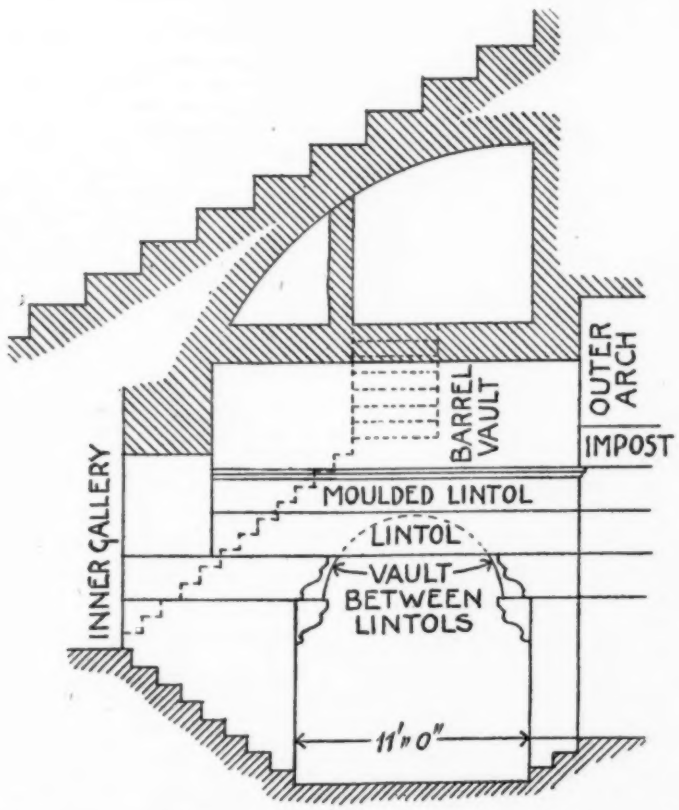
ample is rather the earlier. For in the Antonine period, to which both no doubt belong, Nimes was the more favoured and progressive city, owing to the fact that the first emperor of that name was a member of a Nimes family. In general arrangement and construction the two amphitheatres are alike. The external arcades of both have sixty bays of two stories. At Nimes there was an attic broken up by pilasters, and it is certain that there was the same at Arles, though there all above the arches has disappeared. Internally too, the arrangement of the staircases and galleries seems to have been the same, and in one particular very ingenious. There was a third external gallery above the arcades and within the attic wall, as may be seen at Nimes, but there was insufficient height between the upper arcade and the slope of the seats for staircases to reach it from below. The stairs, therefore, were formed in the thickness of the piers and spandrels of the upper arcade, and on rising high enough turned to right or left over its short cross vaults. The desire to make room for them was the chief reason for these cross vaults and the peculiar construction at the piers between. Without them it would have been far simpler to roof the gallery, as was done in all other cases save one, with a continuous barrel, or if the only object had been to save height, large stone slabs might have been substituted, as was actually done in the one case at Nimes.

The short vaults are of less span than the main outer arches and show externally as an inner order. By increasing the breadth of the piers, they increase the space within them, and by lowering the crown leave more height for the gallery above. They spring from great lintols two deep on each side of each pier, the space between these lintols being filled by a low vault spanning the gallery and under the stairs. Some at any rate of the lintols are between seventeen and eighteen feet long, and none can be very much less. They are of the usual Roman scantling, two feet by two, and there must have been two hundred and forty of them in each building. At Nimes all are more or less shattered, probably by fire or earthquake, for at Arles most are still perfect. The construction of walls and vaults in both buildings is of neatly coursed thin rubble in a skeleton of wrought stone of large size. The courses of the latter range from about twenty to thirty-three inches high, but most are the usual two feet; the architectural details are coarse and clumsy, but the workmanship is excellent.



Monument at Vienne, called Tomb of Pilate.

The courses of the rubble are from about four to seven inches in thickness, mostly in long stones of some depth, almost slabs, the stone being evidently a self-bedded one. The interior of the walls and pockets of the vaults are filled with rough rubble, concrete being used only for levelling up surfaces.



Nimes Amphitheatre: Sketch Section of Upper Galleries and Stairs in Piers.

PLANNING OF SCHOOL BUILDINGS

FOLLOWING Circular 1397, on the problems of organisation in connection with the provision of proper educational facilities for older children (issued by the Board of Education and published by H.M. Stationery Office, price 1d. net), the Board of Education have issued for official use a pamphlet (No. 60, H.M. Stationery Office, price 6d. net) on the "New Prospect in Education." The pamphlet contains the following references to the planning of schools:—

In planning buildings for a senior school, it is necessary to think out what is required to meet its own special needs, rather than to attempt to imitate too closely already existing schools, that have to serve rather different purposes, and that are able to provide a longer educational course. The most obvious requirement is the provision of practical rooms for manual and domestic work, preferably as an integral part of the school premises. Many schools will have to continue to use existing centres, but wherever possible it will be a great advantage if the practical instructors can be members of the school staff, and if all the work of the school can be carried out on the same premises.

It is important, from the point of view of the economical employment of the staff, that there should be enough practical room accommodation in any one school to take a full class simultaneously. This will normally mean accommodation for 40 pupils or, if it is a mixed school, the domestic and manual rooms should each provide for rather more than 20 pupils, as it cannot be assumed that each class will be equally divided between the sexes. In a school of 400 pupils this will enable each class to have half a day per week in the domestic or manual rooms, but the accommodation will not necessarily be excessive even for a smaller school, as some of the classes may with advantage give more time than this to practical work.

Apart from these special subjects rooms, the school should have one or more classrooms of more than the usual size which may serve the purposes of an art room or a science room, or for needlework and the lighter forms of handicraft, or as the school library. If furnished with movable flat-topped tables, and with ample storage cupboards, such a room may serve for one or more of these purposes as well as for ordinary class work. For some purposes a room of 600 sq. ft. will suffice, but any room to be used for practical science should contain at least 700 sq. ft. and should have gas and water laid on. When the school is first opened, these rooms should be fairly lightly equipped, additions being made as it becomes more clear in what direction the school will develop most strongly. Art and science, for example, will both take their place in the curriculum, but one school may develop a course that is specially strong in art, while another will excel on the side of science. The buildings should therefore be planned and equipped to leave the school free to grow as best suits its own particular needs and capacities, and the plans should, as far as possible, allow for additions to be made, if it is found later on that numbers increase, or that some further special accommodation is required.

On this basis a school with the following accommodation would make reasonable provision for about 400-440 senior pupils:—A hall for assembly and for physical training when taken indoors; eight classrooms for 40 pupils, i.e., each of approximately 480 sq. ft.; two larger classrooms of 600 or 700 sq. ft. each; enough accommodation for manual or domestic instruction to allow a full class to receive instruction at the same time; staff rooms, cloak rooms, etc.

SOCIETIES AND INSTITUTIONS

IN MEDITERRANEAN WATERS—THE CRADLELAND OF ARCHITECTURE.

En route from Melbourne to London recently, when in the Mediterranean, Mr. William Lucas, an Australian architect, delivered a lecture on this subject, in the course of which he said if they studied the lay-out of the Mediterranean — the setting, the constructive features, and took stock of the scope of surrounding durable materials, it would be seen that the call for the birth of architecture was essentially clamant. Matchless sites, and these, moreover, affording vistas of exquisite beauty, were at disposal.

"Things not made with hands" had their force considerably enhanced by the quarrying, the shaping, and the placing together, by hand and brain—even though those things be despised and rejected of men—in the glories of mass, proportion, and scale, through the medium of architecture. To conceive of the condition of the world of to-day without the granite, the syenite, the marble, the onyx, and the alabaster along the Mediterranean lands, as far-flung by master minds — Egyptian, Greek, Byzantine, Moor and Goth—in temples, basilicas, fora, baths, palaces, theatres, churches, mosques, triumphal arches—was impossible. Well did we do to pay homage to those sturdy mariners who, in their frail craft, "cockle-shells," buffeting waves and winds over long wearisome days, bore precious cargo of sumptuously rich rocky material. One had only to think of the days when Rome decided to go beyond the white marble with which Greece had been content, and utilise the opalescent figuring of the rocks of the Ægean archipelago. The area was favourably planned geographically for early craft and early seamanship, and there was appreciative intercourse; for instance, the exceptionally magnificent temple of Artemis at Ephesus, in Asia Minor, was designed by an Egyptian architect.

Not only had much which remained *in situ* in the form of ruins in the cradleland of the Mediterranean, a glory and a grace which enhanced the finer sensibilities of our race, but fragments scattered, as it were pell-mell, among the centres of modern civilisation, were deemed to rank among the priceless treasures of mankind. And this Mediterranean basin, since those great historic days, had been continuous in exerting powerful influence for good in the direction of architectural design. The lecturer then proceeded to give examples drawn from the range of history, from Egyptian to modern times; making it clear that in the realm of Gothic architecture, England, France, and Spain held pre-eminence: whilst as to the vast extent of the supplies of the Mediterranean shores, he instanced the quarries at Carrara, which still yield a great proportion of the world's supply of marble, though they had been worked continuously since prior to the Christian era.

WESTERN REGIONAL CONFERENCE.

A REGIONAL conference on housing has been held at Bath, and was attended by representatives of local authorities in Bristol, Somerset, Gloucester, Wilts and Dorset. Alderman C. H. Long presided.

Mr. J. G. Martin, secretary of the National Housing and Town Planning Association, said that though the number of houses built since the Armistice in this country had not been equalled by any other country, and perhaps political wizards were juggling with statistics and perhaps preparing the way for crying a halt in housing, it was well to consider the needs of the people. More than 50 per cent. of the houses erected had been for sale and not for letting, and had not, therefore, appreciably relieved the difficulty in regard to the lower-paid wage-earner. There was still an enormous amount of leeway to be made up. It would be disastrous if any further reduction in the subsidy was made before October, 1930. He thought Mr. Chamberlain's reply to a question in the House of Commons on May 10 was disquieting, as he would not give a year's notice of any change. Some might think that was going to foreshadow a further reduction.

Alderman Sheppard (Bristol) said he did not think they would get much further in a reduction in the cost of building to meet the requirements of the lower-paid workman. They would make a mistake if they tried to get a programme to meet the problem of the man with only 30 shillings a week. In that case the wages were wrong, not the houses. In Bristol years ago people were paying not more than about seven shillings a week, but the houses were put up at the expense of the bankruptcy of the builders. He felt they had reached the saturation point so far as regarded people who could afford to buy their own houses. The problem was how to meet the needs of the people earning about £2 18s. a week. To recondition houses cost almost the pre-war price of the house, and reconditioned houses had only a life of ten years or so. The Government would make a mistake if they did away with the subsidy.

A resolution, moved by Alderman Mitchelmore (Yeovil), and seconded by Mr. Dix (Cheltenham), was passed reaffirming the conviction that the houses required by the working classes could not be provided under present economic conditions without adequate State assistance, and declaring that the experience of the past year had clearly shown that, following the reduction in the rate of the housing, there had been a marked falling off in the number of houses under construction under both the 1923 and 1924 Housing Acts: a serious increase in the number of unemployed workers in the various branches of the building trade, and a tendency to lower the standards of quality and size of working-class dwellings, and urging on the Ministry of Health the paramount importance of making no further reduction in the rate of subsidy under the 1924 Act before October 1, 1930.

Introducing the question of the slums, Mr. Martin said it seemed desirable there should be some national policy. The Council were against the reconditioning of really worn-out, insanitary houses.

Alderman Sheppard said one of the great difficulties was the slowness with which local authorities could develop their schemes. The difficulty was in not being able to get alternative sites on which to put the people after they had been cleared out.

Dr. Savage, Medical Officer of Health for Somerset, said he thought the real reason why the slum problem was not being tackled more rapidly was due to the fact that members of housing committees had not recognised that it was a public health problem. They had looked upon it as an ordinary housing problem seeking economic rents.

The following resolution was passed:—"That in the opinion of this conference local authorities should take immediate steps to prepare comprehensive programmes for dealing with slum areas, so that the demolition of unfit houses can be undertaken and improvement and reconstruction schemes proceeded with, and that the Government should give further financial aid to the schemes."

The conference also discussed the problem of rural housing and the value of town-planning schemes. Regarding the latter, it was thought that the Prime Minister should afford Parliament an early opportunity of passing the necessary amending legislation, and the opinion was expressed that it should be a statutory duty for every local authority to prepare and submit a town-planning scheme. A resolution was also passed recommending to the Ministry of Health, in order to facilitate the adoption of town-planning schemes by rural authorities, that the cost should be borne by the contributory places or parishes and not by a district charge.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

At a general meeting of the Royal Institute of British Architects held on Monday, June 4, the following members were elected:—

As Fellows (24).

W. A. Banks.
D. A. Campbell.
W. F. Dickinson, J.P.
Colin M. Drewitt.
T. G. Gilmour.
C. H. Murray.
Ernest Prestwich, M.A. (Liverpool).
W. J. Price.
A. L. N. Russell.
E. P. Wheeler.
T. H. White.
H. J. S. Abrams.
T. H. Baker.
J. H. Gall.
W. F. Harber.
J. G. Oatley.
E. H. Parkes.
G. Anag.
V. Bonella.
J. A. Charles.
Gavin Lennox.
D. W. Macmath.
R. Matthews.
J. S. Syme.

As Associates (49).

H. A. Barton.
Helen M. Benham.
E. L. Bouillon, B.Arch. (McGill).
H. J. Brown.
John Byers.
E. W. Chapman.
W. C. Childs.
F. Chippindale.
J. Cohen.
H. C. D. Cooper, B Arch. (McGill).
D. L. Crawford.
C. R. Crickmay.
C. Dain.
R. P. Easton.
D. T. Edwards.
Marv F. R. Ellis.
N R. England.
A. L. Farman.
K. E. F. Gardiner.
E. A. Gardner.
Eric Garthside, B.Arch. (Sydney).
G. C. P. Gough.
G. A. V. Hall, B.Arch. (Liverpool).
R. Hobday.
J. Jeffrey.
A. E. C. Lipp.
J. MacGeagh.
J W. S. Monson, B.A (Cantab).
R. G. Morgan, M.C.
E. S. North.
E. A. Paterson.
R. S. Perry, B.Arch. (McGill).
R. A. Phillips.
M. A. de Q. Quincey.
G. W. Robertson.
H D. Robertson, B.Arch. (McGill).
A. J Saise.
A. T. Scott.
B. C. Sherren.
W. L. Somerville.
E. S. Stackhouse.
L. G. Stokes.
S. L. Thomson.
R. M. Walker.
B. R. Ward.
F. Waterman.
C. S. O. Watson.
W. G. Weir.
Alan Woodrow.

As Hon. Associate.

Hugh Davies.

The Intermediate Examination, May, 1928.

The Intermediate Examination qualifying for election as Student R.I.B.A. was held in London from May 11 to 17, and in Manchester from May 11 to 16. Of the 126 candidates examined 33 passed and 93 were relegated. The successful candidates are as follows, the names being given in order of merit as placed by the examiners:—

D. E. Harding.
W. E. Fancott.
W. M. Blackett.
V. C. Barnes.
M. Maybury.
C. S. Day.
F. W. C. Adkins.
J. E. Farrell.
H. Pittaway.
D. F. Lumley.
G. S. Hay.
W. B. Acworth.
L. W. Barker.
W. G. Benoy.
W. P. Clayton.
E. J. Cunliffe.
M. Gillett.
A. S. Gray.
L. S. Jacobson.
J. E. R. G. Kean.
P. H. Knighton.
J. W. Lee.
H. L. Meed.
R. B. Padmore.
H. G. Pescod.
A. Ll. Smith.
J. A. Tadman.
H. J. Tanton.
J. B. Townsend.
W. L. Twigg.
L. B. Ward.
F. S. Wilbond.
G. H. Willson.

The R.I.B.A. London Architecture Medal, 1927.

The Jury entrusted by the Royal Institute of British Architects with the Award of the London Architecture Medal have announced their award for the year 1927. After careful examination of drawings and photographs of all the buildings which were nominated for the honour, the jury has given its award in favour of "Chester House," Clarendon-place, W.2, designed by Sir Giles Gilbert Scott,

R.A., F.R.I.B.A. "Chester House" was fully illustrated in *The Builder* for October 15, 1926.

CAMBRIDGE UNIVERSITY SCHOOL OF ARCHITECTURE.

The annual exhibition of students' work was held at the School of Architecture on Tuesday, June 5, when a number of guests attended and were given tea in the beautiful garden of Lensfield House, the new Headquarters of the School.

The School has steadily increased in numbers, and it has been possible to have a new feature in a collection of photographs, models and drawings of work by past students who are now in practice. Mr. Dawbarn's scheme for the Raffles College at Singapore, now building, is the largest work shown; the next in size is Mr. Lord's scheme for the reconstruction of Annandale, Golders Green, for the Students' Christian Movement. An attractive model of a hostel for Clare College was shown by Mr. Tomlinson, and photographs of work by Mr. Hughes, Mr. Seeley, Mr. Pringle, Mr. Westendarp, Mr. Vulliamy and Mr. Christopher Nicholson. The drawing by Mr. Chester Jones, which has recently won the second place in the Cope Memorial, was shown, as well as a most beautiful scheme in colour for a Pavilion for a Riverside Resort, by Mr. Raymond McGrath, a young Australian architect of great distinction who is now a Research student at Cambridge

The old-fashioned study of Classical architecture from books has completely given way to the making of large-scale drawings from the fine examples of Cambridge; notable large drawings of the Downing College Ionic and the Lensfield House Doric, and the Corinthian of the Fitzwilliam, were shown by Mr. Anderson, Mr. Tanichi, and Mr Gogarty, all first-year students. Constructional work of importance in the form of working drawings for a lodge to an estate was shown also by first-year students.

On the stairs were lighter projects, sketch designs in colour for an air port, a memorial to an airman, and a private swimming pool and some alluring posters showed the second year to be well furnished with imagination and the sense of colour. More sober work in this year is shown in working drawings for a village workshop, and designs of petrol-filling stations produced for Lady Walston's prize. The small room beyond was devoted to charming sketches made by an Easter Vacation party in the north of France, conducted by the Director of the School.

More advanced designs were shown by the third-year On the whole, the work in the second and third years indicates a considerable advance in thought and technique, upon which the Director and his able assistants, Mr. Checkley and Mr. Tomlinson, are to be congratulated Especially notable is the work of Mr. Colin Lucas, of the third year, Mr. Bicknell, and Mr. Peter Smith, of the second year, who is a colourist of distinction, in addition to his architectural abilities. The study of art history, on which the Cambridge School rather prides itself, cannot, of course, be shown on the walls, but it will always form a valuable background to the work of the School.

SOUTH WALES INSTITUTE OF ARCHITECTS.

The directors of the Aberthaw and Bristol Channel Portland Cement Co., Ltd., invited on Thursday, June 7, members of this Institute to visit their works and inspect the process of manufacture of high grade Portland cement. Among the members present were: Messrs. C. F. Bates, J. Blackett, T. S. Bowes, C. E. Compton, J. H. Davies, E. E. Davis, E. H. Fawckner, F. R. Griffiths, R. V. Hayman, Frank H. Heaven, C. F. Jones, Horace Jones, J. Herbert Jones, Lewis Jones, A. G Lynham, W. D. Morgan, H. E. Nicholls, G. H. Oliver, J. F. W. Peat, C. R. Peacock, J. L. Rees, G. R. H. Rogers, Walter Rosser, T. Edgar Smith, B. W. R. Thomas, C. S. Thomas, W. D. Thomas, C. F. Ward, H. Weeks, J. Morris Williams, and Mr. Frank H. Heaven, the hon. secretary for visit.

The following processes were visited and inspected:—Mechanical quarrying, stone crushing plant (stated to be one of the finest in Europe), dry milling (grinding the raw stone to slurry), rotary kilns (drying, decarbonation and clinkering), coal drying and pulverising, cement milling and automatic packing. Following on this a demonstration of up-to-date methods for testing cement to comply with the British Standard Specification was shown, after which a practical demonstration of ordinary and "ultra-rapid" hardening cement concrete in their early stages of hardening, i.e., one and two days, took place.

EDINBURGH ARCHITECTURAL PRIZES.

The result has been announced of the prizes and studentships of the Incorporation of Architects in Scotland:—The Sir Rowand Anderson medal and a sum of £100 are awarded to Mr. Kenneth A. Begg, and the prize for third-year students is given to Mr. Basil Spence—both of Edinburgh College of Art. The former studentship is open to any British subject under the age of 28. The subject for this year was an original design for a university union, which, according to the conditions of the competition, must show evidence of the study of ecclesiastical, civil, and domestic architecture in Scotland.

OBITUARY

Mr. Charles Reilly, F.R.I.B.A.

We regret to announce the death, on the 5th inst., of Mr. Charles Reilly, F.R.I.B.A., at his residence, High House, Upminster, Essex, in his eighty-fourth year.

Mr. Charles Reilly was best known for his work in developing the Throgmorton-avenue district of the City. As Surveyor for 40 years to the Worshipful Company of Drapers, he laid out that street and Drapers' Gardens, and designed many of the office blocks in the area. The large block, called Warnford-court, at the start of the Avenue in Throgmorton-street was an early example and was followed by several others in Austin Friars and Throgmorton-street itself. Further afield he built the offices of the Chartered South African Company in St. Swithin's-lane, a block of offices in Mansion House-place, and others in Bucklersbury, Stationers' Hall-court and Ludgate Hill. He built warehouses and showrooms in High Holborn and Tooley-street. His chief work, however, was Drapers' Hall itself, which he commenced in conjunction with the previous surveyor, Mr. Herbert Williams about 1869 and finished by himself. It was an impressive astylar structure, having a long elevation to Throgmorton-street, with a courtyard, dining and reception halls behind, which still exist. Thirty years later he pulled down the front portion of his own building in Throgmorton-street and built on its site the Throgmorton Restaurant, with its deep three-storied basement, including two restaurant floors and a kitchen story below them. At the time, about 1900, this was one of the deepest structures in the City, and involved some difficult underpinning of the heavy walls and piers of Drapers' Hall.

Mr. Reilly acted for many years as Surveyor to the Tufnell Canonbury Estate, and built for it several blocks of flats in Essex-road. His earliest piece of domestic work, executed in the 'sixties of last century, was a house at Blackheath for Dr. Smiles, of "Self Help" fame, and his latest a large Georgian mansion in Essex, called Upminster Court, built just before the war. In the latter years of his practice Mr. Reilly was much employed as a consultant in light and air disputes. The well-known case of "Colls versus the Home and Colonial Stores," on which modern building practice so much relies, was successfully carried through by him to the House of Lords as Mr. Howard Colls' chief adviser.

Mr. Charles Reilly was articled to Herbert Williams, F.R.I.B.A., in 1862, and became an Associate of the R.I.B.A. in 1872 and a Fellow in 1891. He was a retired Fellow since 1922. It is believed that at his death he was senior member of the Institute.

THE HOUSING PROBLEM

In a letter to the "Daily Telegraph" on this subject, Mr. P. H. Edwards writes as follows:—"Although the present Government seems complacent with itself when it quotes the number of houses erected since the Armistice under the auspices of successive Governments, its members yet admit that there is a very considerable shortage. There seems also a grave doubt whether local authorities are likely to respond to further appeals. Great praise is due to the enterprise of the numerous building societies in encouraging private ownership, but these societies can only lend so long as they can borrow from the public, and that is only so long as they are safe and command public confidence. At present many societies lend up to 90 per cent. of value provided the risk in lending above 75 per cent. is covered by insurance, usually paid in a single premium, which means either an addition to the purchase money, or a reduction of the builders' profit, which lessens his ability to build more. The risk has been proved by experience a small one, and yields considerable profit to the insurance companies. May I therefore make the following suggestions:—

"1. In lieu of granting subsidies, either to builders or local authorities, let the Government assist private enterprise by enabling the building societies to lend 95 per cent. of the value in the case of houses above £600, and the full 100 per cent. under £600 by means of Government insurance of the risk above 75 per cent. at the lowest possible rate (eliminating insurance profit), covered by annual premiums on a decreasing scale as the risk decreases. The premiums might be collected by the building societies by means of the addition of a few pence to the monthly instalments of repayment and accounted for to the Government. This would enable a working man to begin the purchase of a house out of income, without having to find any initial sum of £50 or more.

"2. A further reduction of cost can be effected if local authorities are urged to waive for, say, the next ten years some of their more onerous bye-laws and town planning restrictions, to enable side roads, carrying only tradesmen's light carts, to be made 25 ft. wide instead of 40 ft. or 50 ft. provided a minimum width of, say, 50 ft. is preserved between the building lines, to allow a density of fifteen or sixteen houses to the acre in lieu of eight, ten, or twelve now being unnecessarily enforced in quite open districts; and to permit a moderate measure of combined drainage for houses in a specified cubic or superficial area.

"3. A drastic reduction in stamp duties on the conveyances, leases, and mortgages on houses where the purchase money does not exceed a certain sum, say, £600, and a lessening also of legal expenses by simplification of procedure, the use of stereotyped forms, lower registration charges, etc. This is very important, since it deters working men from purchase, not only by the first cost, but by the fact that if his labour is required elsewhere he may have to transfer his holding and again pay legal charges to do so.

"With a view to minimising the weekly cost to the industrial worker earning £3 to £4, the building societies should be encouraged to extend their repayment periods to twenty-five years in consideration of the extra risk being covered by Government insurance. Local authorities should be pressed to take payment of rates weekly (by stamps or otherwise) instead of half-yearly in the case of houses assessed under £20. The industrial house purchaser who is unable to procure a subsidised house might be further assisted by a reduction of rates of, say, one-third over a period of 5 to 10 years when road and other incidental charges have to be met, and this reduction of rates could be covered by a special Exchequer grant to the local authorities."

CENTRAL SCHOOL OF ARTS AND CRAFTS

As affecting so much the future of craftsmanship, this annual exhibition of students' work is intrinsically important, and under the more enlightened methods of instruction in practice during recent years the advance is very marked. The level of the work shown is, on the whole, satisfactory, following a course less governed by the passing than the permanent values of sound craftsmanship. This is due to the instruction being undertaken by men themselves of proved experience in the various crafts.

The exhibits cover a wide range of applied art, and include silversmithing, jewellery, enamelling, metal casting, stained glass, furniture, lithography, to mention only a few of the classes. Though we can point to no examples revealing exceptional attainment, they all bear the stamp of the right and intelligent use of materials and of the limits through which they are best interpreted.

The stained glass shown, while very well executed, and so much better than much that still perpetrates itself for ecclesiastical purposes, is a little sooty, and suggests rather a stained-glass art for haunted houses, a heraldry for condemned cells! To make it look old, through the matting of the surface of the glass, as though to revive the weather-eaten effects of antique glass, is not desirable. Matting, like any other good thing used in excess, becomes tiresome. We might also suggest more illumination and cheerfulness in the colour better to reflect not only the light but the high spirits and endeavour of the able young craftsmen and women, who are otherwise so successful in their craftsmanship. The translucent qualities of glass should not be lost. Its property is to give light as well as colour, and to darken this out is to lose one of its most lovely qualities. Pottery takes a high place in the exhibition, and well sustains the promise of previous years, and some of the exhibitors have made a place for their good work already beyond the school. Examples by S. Finnemore, M. K. Vowles, and H. G. Cayley Robinson should be noticed as among the best pots shown. In the modelling class the figure work is of average merit, some of the smaller examples showing most sensitiveness to form and design. Two studies from the life model, on either side of the doorway, leading to the second room, are lacking in sculptural appreciation and capacity for treatment, though showing a fair ability to reproduce what was before the students. The one by M. Thomson is the most satisfactory. A boy and duck by F. Bruce is firmly modelled, but somewhat conventional. Examples by J. Hodge show independent observation. Lithographs form a very interesting portion of the exhibition showing considerable attainment, some of the examples revealing a longer experience than that of school training. Lithos by Miss Bonham Carter and G. Raverat are very accomplished. Various woven rugs are included, which in design and weaving are attractive—one by T. Moorman should be noticed. A rug by N. Bloxam is not as satisfactory in colour as it is in craftsmanship. Much excellent jewellery and silversmiths' work makes it impossible for us to believe that there is not a growing demand for this more genuine craftsmanship, in place of the mass of modern shop-window production without genuineness at all. Among the costumes shown, one designed by N. Warry should be noticed. We reluctantly refrain from mention of so much more that is worthy of recognition and encouragement in an exhibition which all those interested in the arts and crafts should make a point of seeing. Some of the examples are for sale, and the opportunity of acquiring good work in the various crafts should be taken advantage of. To encourage the production of work so sound, and therefore so good, is an investment for those who care for these things.

For the vogue of the modern point of view—whatever that is—is not pressed in the teaching. It is the fashion to extol the modern spirit, and we are told to "draw our resources from the experience of modern life," which all sounds very plausible, but really means very little. For what is our present life, and what is its experience? We may symbolise engineering with an engine, art with a palette, or science by an atom. But for art to interpret its own time, there needs more than these material symbols. May it not even be the case that the issue is not thus touched at all, and that, though we are concerned with expressing ourselves—it is also a question of what the self is we have to express. This is no less fortified by rejection than acceptance, and to be well acquainted we must look behind our own life, which is the sum of previous accomplishment and appreciation. We refer to this, for were the student marching forth from the schools to suppose "that the expression of modern life" was to be accepted out of hand, he would be on perilously false ground. He has also to choose well, to select and to reject—sometimes to reject himself. So only will he learn there is something much more than being a craftsman. It is this grievous error which may lead us so much astray. Craftsmanship is not enough.

Architecture does not figure largely in the exhibition, but some very creditable design is shown in domestic work, a cottage in Kent and designs for an architect's house and offices being quite nicely proportioned. The designs for banking halls hardly come up to one's ideas of the dignity and quality we look for in bank buildings. The design for a concrete church is not a good expression of the material, and the proportion of parts and general outline not at all good.

We expect the exigencies of space prevent a more satisfactory representation of the school's architectural work being shown, but we feel sure there is material amongst the students which will respond to right direction, and we should warn them of the bad influences of the ill-digested, eccentric designs which are so much in evidence today. If our students would learn from the records of the Prix de Rome and other competitions, we think they would see that there is a decided return to a more dignified and sober architectural treatment, and less evidence of a desire to obtain prominence by mere eccentricity. Is there anything better in a design which consists in the main of many strongly-marked vertical lines which leave no plain wall surface available than a treatment which gives full value to the enclosing walls of a building, emphasised by nice distinction of parts?

The exhibition remains open until the end of June, from 10 a.m. to 8 p.m. (Saturday till 12 mid-day).

"Briarcombe," Carbery Avenue, Bournemouth. MR. HORACE DAN, L.R.I.B.A., Architect.

ACOUSTICS OF AUDITORIUMS

MR. F. R. WATSON, lecturing on this subject at the University of Illinois, U.S.A., on March 1, said that a consideration of recent investigations had led him logically and unexpectedly to the conclusion that good acoustics in an auditorium might be obtained by making it like the outdoor theatre of the Greeks. Also, it was concluded that better acoustics appeared likely if a study was made of the way in which speech and music were generated with special consideration of the effect of the sound reflected from walls near the speaker or musician.

Very little was known scientifically about acoustics of auditoriums until W. C. Sabine, about 1900, began to publish the results of his work. Aside from occasional minor faults of interference and resonance, Sabine concluded generally that the acoustics of a room depended mainly on the reverberation or decay of sound. He conducted an extensive and careful series of investigations which showed that the time taken for a standard sound to die out in a room depended on the loudness of the sound and on the volume of the room, and inversely on the absorption of the surfaces in the room. Most of the investigations since then had only amplified and extended Sabine's fundamental conclusions.

As a result of those efforts, auditoriums had been greatly improved in acoustical qualities, so much so that attempts had been made to specify "optimum" conditions, with the hope of securing perfect acoustics. Auditoriums adjusted according to those conditions, while generally satisfactory, had not always given the expected perfect effects. In some cases, speakers and musicians had voiced objections without being able to state clearly what the trouble was.

Within the past two or three years, several publications had appeared that yielded information from different viewpoints than those given originally by Sabine and that furnished possibilities of improving acoustic effects. That was, while Sabine investigated primarily the reverberation and decay of sound, those later studies dealt more particularly with the growth of sound in a room.

For instance, Petzold has shown that blurring would be set up if two identical speech sounds reached an auditor with a time interval between them of .05 second or more. This would be the case if two speakers were separated about 56 ft. and uttered the same words simultaneously. While it was practically impossible for two speakers to do this, the effect might be obtained by a single speaker who stood near a reflecting wall so that his acoustic image on the other side of the wall might be thought of as saying the same words as the speaker and at the same time. The image was really due to the reflected sound. For music, Petzold found a shorter time limit between two sounds of .035 to .042 second, depending on the character of the music. That conclusion of Petzold indicated the importance of studying the reflected surfaces near speakers and musicians to avoid blurring effects. Usually in auditoriums, the space about the performer had been decided by other requirements than acoustics. The large stage house of the modern theatre gave little practical opportunity for suitable reflecting walls. In smaller auditoriums it would be easier to design such reflectors without the usual heavy absorbing curtains.

Such reflecting surfaces should preferably be plane, and situated not more than about 20 ft. from the performer—a smaller distance would give better results—and inclined so as to reflect sound to the audience. Under these circumstances the direct sound from the performer was reinforced without distortion by a number of images, all giving simultaneously the same sound.

Not only were the auditors benefited by this arrangement, but the performer himself got an immediate response to his effort that allowed him to adjust his speech or music to get the best effect. Without this, the performer felt lost, and the resulting sound, particularly music, lacked perfection. Musicians stated that they preferred to sing or play near a wall—and always with a resonant stage floor, without carpet—presumably because of the reassuring support given by such reflecting surfaces.

An experiment of this nature recently performed by himself, said the lecturer, supported that view. A reflector, 12 ft. by 14 ft., was hung horizontally over a bandstand, and, by means of ropes and pulleys, could be raised or lowered. When the reflector was lowered successively to positions 12, 10, 8, and 7 ft. above the players, the acoustic conditions were improved. The comments of the players were: "Plays easier," "Tones are more natural," "Gets better as the reflector gets lower," "Tones are smoother," etc. The resultant music in the hall for auditors was also better as the reflector was lowered.

Petzold described, said the lecturer, some uses of reflecting surfaces about orchestras and choruses. An orchestra pit, for instance, was a resonant enclosure that allowed the music to be reinforced and blended beneficially before it went out to the audience. "Sounding" boards were advantageous if they had sufficient size and if placed intelligently in accordance with acoustic principles.

Experiments by Knudsen showed that speaking was better understood as an auditorium was made successively "deader" with sound-absorbing materials, thus imitating an outdoor theatre. He found for an open-air theatre (Hollywood Bowl, Los Angeles) that a listener 100 ft. from the speaker could understand speech better than in the most satisfactory Los Angeles theatre. Lifshitz found the same effect, but thought the speech lost its musical quality and became dry and lifeless.

The Eastman Theatre, Rochester, New York, gave further information in this regard. Some apprehension was felt in designing the acoustics of this theatre whether or not music would be heard distinctly on the mezzanine balcony. The opening to this balcony, under the main balcony, was comparatively small, and it seemed likely that only a small amount of sound would enter. Also, this space was furnished with a considerabe amount of sound absorption in the upholstered seats and carpet. On completion of the theatre, however, the reception of music on this floor was thought superior to other locations. Here again it appeared advantageous to have conditions for listening quite dead acoustically.

From the investigations cited in this article he was led, said the lecturer, to draw certain conclusions and to make suggestions for further experimental work. That was, the problem of the acoustics of auditoriums was two-fold—first, a study of the generation of sound and its building-up processes, which were practically completed in one- or two-tenths of a second; and second, a study of the decay of sound. The latter feature had been studied extensively by Sabine and his followers, but further investigation of the growth of sound appeared promising in securing important information. The growth of sound and the decay of sound are not independent processes, because the absorption of the room affected both. What was desired apparently was to have the time of reverberation shortened sufficiently so that the successive sounds of speech and music would be given opportunity for suitable development without possibility of serious overlap and distortion. Increasing the absorption allowed a sound to rise more quickly to its maximum value, and also increased advantageously the rate of decay so that the field was cleared for the next sound.

Further information on the relative adjustment of the growth and decay of the sound was given by the investigations of the "masking" of one tone by another. For instance, Wegel and Lane showed that the masking of two tones was greatest for tones nearly alike. Also, they found that loud tones more easily masked tones of high frequency than those of low frequency. Knudsen showed that noise had more effect than a pure tone on another tone. He stated also, "For good hearing in an auditorium, the speech energy should be from 1,000 to 10,000 times the energy of any interfering noise." These investigations would indicate how much two sounds could overlap without serious distortion.

The various investigations discussed, said the lecturer, suggested the possibility of an "indoor-outdoor" theatre; that was, an indoor theatre that incorporated the good acoustics of an outdoor theatre. An investigation should be made to improve, if possible, the stage conditions of the outdoor theatre. A stage with a wooden floor, a vertical rear wall, diverging side walls, and a sloping ceiling gave promise of beneficially reinforcing speech and music and also of developing enough resonance so that the speaker could better judge the effect of his voice. The use of thin, resonant reflecting boards would yield some interesting effects. On the other hand, it would be instructive in an indoor theatre to have the auditorium quite dead—comparable with outdoors—but to try a stage similar to the one just described. Additional information was needed about the resultant speech effects at different points in a room; that was, a photograph of the vibrations set up by words and music of different kinds when sound-waves crossed each other. Some attempts in these directions were being tried by the lecturer, but cooperation of others in that apparently important development appeared desirable.

LAW REPORT

KING'S BENCH DIVISION.
(Before Mr. Justice Mackinnon.)

ACTION BY ARCHITECTS AND SURVEYORS.

Green & Hudson v. Grisewood.

IN this case, heard on June 7, the plaintiffs, Messrs. William Nicholas Green & Alan Hudson, architects and surveyors, trading as Green & Hudson, sued the defendant, Colonel Harman Joseph Grisewood, of Warwick-gardens, Kensington, to recover damages of alleged breach of contract in connection with the erection of houses on the Gypsy-lane Estate, Leicester.

The plaintiffs' case was that they were engaged by the defendant under an agreement dated November 27, 1925, to act as architects and surveyors in the erection of 1,500 houses on the estate in question, and were to be paid £10 on each house. Subsequently the defendant repudiated the contract. The defendant contended that a term of the contract was that the plaintiffs should introduce contractors and be paid £10 on each house completed by such contractors, and as the plaintiffs had failed to carry out that part of the contract he (the defendant) was under no liability to them.

After hearing the evidence Mr. Justice Mackinnon, in giving judgment, said it was clear from the terms of the contract between the parties that the plaintiffs were entitled to judgment. As to damages, the contract, if carried out, could not have been concluded for some time, and in the circumstances he thought the damages should be £4,000, for which amount he gave judgment for the plaintiffs with costs.

Society of Engineers.

The following have recently been elected Honorary Fellows of this society:—Sir Henry Fowler, K.B.E., Sir Herbert Jackson, K.B.E., F.R.S., Lord Lee of Fareham, P.C., G.C.S.I., G.B.E., K.C.B., J.P. Sir Ernest William Moir, Bart., M.I.C.E., M.Am.Soc. C.E., and Sir Josiah Charles Stamp, K.B.E., D.Sc. (Lond.).

REINFORCED CONCRETE

The Institution of Structural Engineers, 10, Upper Belgrave-street, S.W.1, has issued (price 1s. 6d.) a Report by the Science Sectional Committee on Concrete on "Materials and Workmanship for Reinforced Concrete," from which we take the following points :—

Cement.

Portland cement should be obtained from approved manufacturers, and should conform in every respect to the British Engineering Standards Association Specification for the time being in force; quick-setting cement should not be used without permission in writing from the structural engineer.

Fine Aggregate.

The fine aggregate should consist of hard siliceous grains, crushed stone or other material approved by the structural engineer. It should be clean and free from injurious amounts of clay, and any animal, vegetable, bituminous or other deleterious matter. Unless initially clean and free from dust, all fine aggregate should be thoroughly washed with clean water.

All fine aggregate should be capable of passing through a mesh 3/16th of an inch square measured in the clear, and not more than 10 per cent. should pass through a sieve having 40 meshes to the linear inch and wires of 0.0125 inch in diameter, and it should be well graded between these limits.

Coarse Aggregate.

The coarse aggregate should be obtained from clean sea-, river-, or pit-gravel, or should consist of broken stone of a hard nature, or other equally hard suitable material to be approved by the structural engineer.

The following materials should not be used with the fine or coarse aggregate in the composition of the concrete :—

(*a*) Coal residues (including clinkers, cinders, ashes, coke breeze, pan breeze), clay or other similar material; (*b*) Blast furnace slag, copper slag, forge breeze, dross or other similar materials; (*c*) Sulphates, including plaster of Paris and other similar materials; (*d*) Broken bricks, unless approved by the structural engineer.

The coarse material should be of such a size as will pass through a mesh three-quarters of an inch square measured in the clear and be retained on a mesh three-sixteenths inch square measured in the clear, and should vary in size as much as possible within these limits.

For heavy reinforced construction, such as rafts, the maximum size recommended above may be increased to one-fifth of the minimum space between any two pieces of reinforcement, or between reinforcement and shuttering.

Proportions.

The concrete should be composed of Portland cement, fine aggregate, and coarse aggregate. The proportion of the cement should be measured by weight, and that of the fine aggregate and the coarse aggregate should be measured separately by volume.

The proportions of the concrete to be used for any particular purpose must necessarily depend upon the nature of the work and the properties of the aggregates. It is recommended that the proportions of the concrete should be stated by giving the volume of fine and of coarse aggregate required to be mixed with one cwt. (112 lbs.) of cement.

Water.

The water used for mixing cement grout, mortar and concrete should be free from earthy, vegetable or organic matter, acids and alkaline substances in solution or suspension.

The consistency of the concrete should be determined from time to time as work proceeds by means of a slump test. The amount of slump and tolerance should be agreed between the structural engineer and the contractor, after actual experiments with the materials to be used. The slump test should be carried out on concrete immediately after it has been mixed, and before any initial set has commenced, the sample being taken preferably at the point where the concrete is being delivered for placing in the moulds.

In making the test, a mould in the form of a truncated cone, 12 in. high, 8 in. internal diameter at the base, and 4 in. internal diameter at the top, should be placed on a level impervious surface. It should be suitably weighted down and filled to about one-fourth of its height with the wet concrete, which should then be tamped or worked with a $\frac{5}{8}$ in. diameter rod, 2 ft. long, bluntly pointed at the end, 25 strokes with the rod being used. The filling should be completed in successive layers similar to the first, and the top struck off so that the mould is exactly filled. It should be left for three minutes and then the mould lifted vertically, leaving the concrete to subside. The amount of this subsidence is known as the "slump" and serves as a guide by means of which the need for more or less water in the mixing can be determined.

Mixing.

The concrete should be mixed for not less than two minutes, and until it is of even colour and of uniform consistency throughout. Any concrete which shows signs of initial setting before it is deposited should not be used in the work and should be removed from the site.

Reinforcement.

Mild Steel.—All mild steel reinforcement should comply with the conditions and tests laid down for Class "A" steel in the B.S.S. No. 15, 1912, Structural Steel for Bridges and General Building Construction, or such revisions thereof as may from time to time be published. All plates, sections and bars should be rolled from new billets. Re-rolled old material should not be used.

Hard Drawn Steel Wire.—All reinforcement of hard drawn steel wire should comply with the conditions and tests laid down in the B.S.S. No. 15 mentioned above, with the following modifications :—"The tensile breaking strength should not be less than 37 tons per sq. inch. The elongation should not be less than $7\frac{1}{2}$ per cent. measured on a length equal to eight times the diameter of the bar tested. All metal for reinforcement should, before depositing the concrete, be clean and free from all loose mill scale, dust, and loose rust and coatings, such as paint, oil, cement grout, etc. Welding should not be allowed in any main reinforcement.

The number, size, form, and position of all steel meshwork bars, ties, links, stirrups, and other parts of the reinforcement should be placed in exact accordance with the working drawings. Nothing should be allowed to interfere with the required deposition of the reinforcement, and the contractor should make a particular point of seeing that all parts of the reinforcement are placed correctly in every respect and are temporarily fixed where necessary to prevent displacement before or during the process of tamping and ramming the concrete in place.

Formwork.

The contractor should be responsible for the sufficiency of the formwork, but if required by the structural engineer he should, before commencing work, submit for approval details of the formwork to be used. Care should be taken that when any formwork is re-used its surfaces should be smooth and clean. Formwork or moulds for beams and allied members should, where so required, be designed and supported in such a manner that the sides may be removed without interference with the remainder of the formwork

The responsibility of the safe removal of the whole or any part of the formwork should rest entirely with the contractor.

Concreting.

Immediately before any concreting is commenced all formwork should be carefully examined to see that all dirt, shavings, sawdust, and/or other refuse has been removed by brushing and/or washing with a hose. All traps and temporary doors should be carefully made good before any concrete is put into place. The inside of the forms should be treated with a coat of approved material if so desired. In warm weather the inside of the moulds should be wetted shortly before concreting is commenced. The concrete should be sufficiently tamped and consolidated round the steel reinforcement and into all parts of the formwork. Care should be taken that the steel reinforcement is thoroughly surrounded by the concrete and that no voids or cavities are left. Care should be taken that the reinforcing bars projecting from concrete which has been recently put into position should not be shaken or disturbed.

Before executing reinforced concrete work in foundations, any moist or soft ground should be excavated to a further depth of 3 in. and a layer of rough concrete—1 cwt. cement, 5 cub. ft. fine aggregate, 10 cub. ft. coarse aggregate — should be spread and levelled by spade finish, or dealt with otherwise as the structural engineer may direct. The work should be concreted in layers of thickness sufficient to ensure proper tamping, and the full thickness should be made up in immediate consecutive similar operations. Where cessation of work is essential or unavoidable, the break should be at right angles to the span and in the centre of same in the case of slabs and beams. Before depositing fresh concrete upon or against any concrete which has already hardened, the surface of the hardened concrete should be thoroughly roughened, thoroughly cleaned from all loose and foreign matter, and well washed with clean water. When concreting in hot weather the surface should be kept moist. The work should be protected, where practicable, from the direct rays of the sun and from drying winds. During inclement or frosty weather all work should be properly covered and protected.

Tests on Completed Work.

After ample time has been allowed for the hardening of the concrete, loading tests on the completed structure should be conducted on portions to be selected, and in manner as directed, by the structural engineer. All loading tests should be conducted by the contractor under the direction of the engineer. Unless otherwise specified the contractor should provide all instruments, apparatus, material, labour, and assistants necessary for the proper execution of the tests

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Town Planning in England and Wales.

Town-planning schemes were submitted (Stage C) for the two months ended May 31, 1928, as follows :—Middlesex : Acton T.C.; Wales (Glamorgan) : Cardiff R.D.C. (Nos. 2, 3 and 4); Surrey : Coulsdon and Purley U.D.C.

Preliminary statements submitted (Stage B) :—Essex : Orsett R.D.C. (Section 2); Lancashire : Morecambe T.C.; London : London C.C. (No. 8).

Resolutions received (Stage A) :—Derby : Alvaston and Boulton U.D.C.; Durham : Gateshead T.C.; Essex : Epping U.D.C.; Kent : Bexley U.D.C.; Lancashire : Wardle U.D.C.; Middlesex : Hatfield R.D.C. (South Mimms R.D.C.), South Mimms R.D.C. (No. 2); Somerset : Axbridge R.D.C.; Southampton : Gosport T.C.; Surrey : Farnham R.D.C.; Sussex : Hailsham R.D.C., Steyning West R.D.C. (No. 2); Westmorland : South Westmorland R.D.C.; Yorkshire (E.R.) : Kingston-upon-Hull T.C. (N.E. Amendment); Yorkshire (W.R.) : Pudsey T.C.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting?—ED.

Responsibility for Laying Sewer.

[REPLY TO "P. J. THOMAS & SON," JUNE 1.]

Under Section 23 of the Public Health Act, 1875, a local authority has power to enforce the drainage of undrained houses to enter its sewer if its sewer is not more than one hundred feet from the site of such houses.

Under Section 150 of the Act, a local authority may require a new street, not repairable by the inhabitants at large, to be sewered, etc., and similar provisions are made under Section 6 (1) of the Private Street Works Act, 1892, i.e., in localities where that Act has been adopted.

In all the above instances the cost of the sewer is borne by the owner or owners concerned.

Under Section 37, Part III. of the Public Health Act, 1925, where that part has been adopted, the local authority has power to lay drains in a private street, not being a highway repairable by the inhabitants at large, so as to connect premises with a sewer laid in the street by agreement with and at the expense of the owner or owners thereof.

LEGAL.

Building Contract.

[REPLY TO "PARTY," JUNE 1.]

The position is as stated by "Party" under the circumstances described; unless it can be shown that the architect has exceeded his authority as the agent of the employer; or has acted inequitably or fraudulently, in which case the architect is liable for an action of deceit.

So if an architect withholds from the contractor what the latter is entitled to, that is fraud. Or again, if it can be proved that the architect, in the position stated, does not preserve that attitude of judicial independence needed and required by him to discharge his duties, though he may, in fact, not be guilty of collusion or fraud, he is no longer fit to give a decision; and any decision thus given would not be binding on the contractor. (See Creswell on Building Contracts.)

LAW.

Defects in House.

SIR,—In 1923 "A" converted a barn into a dwelling-house. "B" offered to purchase it. "A" pointed out that it was not a new house, and although he believed that concrete and damp course had been put in, he had not been able to stand over the men and see, and could not guarantee the work, but let "B" live in the house for 12 months on approval. Several defects appeared, whereupon "A" allowed "B" £20. On "B" paying deposit and quibbling, "A" said he did not care whether "B" bought the house or not, but "B" said he was determined to have the house. In 1928 "B" complained that boarded ground-floors were decayed and alleged "A" had warranted damp course and concrete, whereupon "A" told "B" to spend no more money, vacate the house, and he would return the purchase-money. "B" refused unless "A" gave him £50 more for work done by "B" without "A's" consent. "A" said he had given no verbal warranty, but if "B" would produce one in writing "A" would honour it. "B" has since spent £100 on damp course, etc., without "A's" consent. Can "B" obtain damages from "A"?

S. & F.

Garage and Local Authority.

SIR,—In 1925 I purchased a house, including a garage at the end of the garden, a heavily built wood and glass structure. I pay rates and taxes for my house and garage separately, and it now appears that the local authority find they cannot trace having passed any plan for the construction of my garage, which was built about 14 years ago by the then owner, and my house during that period has passed through several persons' hands (bought and sold). The local authority now inform me that they may require the motor garage to be pulled down. The trouble has arisen in this way: the road at the side of my house has now been made up at my cost, after being almost unfit for any vehicle to use for 14 years, and when the work was started I made application to the Council for an entrance through the kerb for my car, which they refuse to make.

READER.

[This is not a new building, nor is it used for habitation. It may or may not be contrary to the by-laws in force in the district, and its erection may or may not have been sanctioned. It is thought that the local authority cannot in the circumstances demolish the building, and in any case must, before attempting to do so, give notice to the owner, also an opportunity of being heard thereon. Otherwise their action would be illegal. It is further thought that the course to pursue would be to let the matter take its course. It is clear that the authority cannot be forced to make the entrance at the kerb if they are minded not to do so.—ED.]

Gas Services.

SIR,—I would like to know what would be a fair price per point for running, in compo piping, gas services to the several rooms of an eight-roomed house. The services are fairly extended, and it is only a rough idea that I want.

EMPLOYER.

Linoleum on Wood Floors.

SIR,—I have met many cases where linoleum laid on wood boards has led to dry rot setting in, but, so far as my own experience goes, this has only been the case where there has been a poorly-ventilated space under the wood floor. But I have been told of cases where a wood floor laid in mastic on good concrete, and covered with lino, has developed the same trouble. Am I right in saying that where a floor is so practically hermetically sealed top and bottom, the dry rot can only have developed out of incipient qualities in the timber and that healthy timber cannot so be affected unless played upon by damp, stagnant air?

QUESTION.

Value of Oak Trees.

SIR,—I have some oak trees of not extraordinary girth or size which have to be cleared away for certain reasons of convenience. A contractor has offered to fell them, clear away and grub up the roots, level, and cart to his yard five miles away, for the value of the timber, but will not allow anything above this for the timber thus acquired. Could you advise me if this is a fair bargain; or, if not, could these trees be profitably converted by hand on my premises?

ESTATE.

Goodwill.

SIR,—I have read with interest Mr. Creswell's notes upon the subject of "goodwill" as applied to a builder's business. In the case of an architect's practice this seems to be a very much more vague matter, and the legal outlook thereon would be valuable and instructive reading, especially as applied to professional partnerships.

ARCHITECT.

LEGAL QUESTIONS WE HAVE BEEN ASKED

BY W. T. CRESWELL, Barrister-at-Law, Associate (late Fellow) Surveyors' Institution, etc.

XXIV.—HOW DO VERBAL ORDERS FOR VARIATIONS INFLUENCE AN ORAL AGREEMENT?

MOST written building agreements provide that the employer may vary and deviate from the work comprised in the contract through his architect, on the latter's order in writing. The employer is thus protected, though not entirely, from any claim for work carried out by the contractor without the order of the architect. In all such cases the contractor should ask for, and obtain, the written order of the architect for the additional work; for it must be remembered that works which are indispensably necessary to complete an "entire" contract cannot be claimed as "extras" unless the bills of quantities form part of the contract, when, as determined in Patman and Fotheringham, Ltd. *v.* Pilditch (THE BUILDER, July 16, 1904), if the amount of work included in the contract is defined by the bills of quantities, then the contractors are entitled to charge extra for any excess thereon.

If a new contract for the additional work can be clearly established, the original written agreement need not be produced; otherwise it must be, even though the employer has had the benefit of the additional work. This is in order to separate the additional work claimed from that included in the original contract.

A contractor can, of course, refuse to carry out additional works not ordered in writing where the contract agreement specifies they are to be ordered in writing. In Molloy *v.* Liebe (1910), 102, L.T. 616, the building agreement contained a clause to the effect that no additional works, beyond those included in the contract, would be allowed or paid for, without an order in writing from the employer and architect. The employer insisted on certain works, which he alleged were included in the contract, being executed, though the contractor maintained they were extras. No order in writing was given for the extras, but it was held nevertheless that there was an implied promise to pay for them.

Agreements Not in Writing.

There are many instances where the agreement entered into between the parties to a building contract is not in writing; also where variations and additions are ordered verbally, raising questions whether the parties to the oral agreement have rescinded that contract, and have expressly or impliedly entered into a new contract.

In reality, all orders for extras accepted and carried out by the contractor are new contracts, unless provided for under the original agreement. And these new contracts are binding, even if, for any reason, the original agreement has been invalidated or voided.

Subject, of course, to the particular terms of the original contract, a contractor may, in general, raise questions as to whether any extras or commissions ordered should be matters for a new contract.

Each particular instance must be considered on its merits, since it is a question for interpretation, how far a new agreement expressly or impliedly qualifies, waives, or is in substitution for, the former agreement, or whether the two agreements are to be construed together.

To justify the conclusion that the parties have entered into a new contract, there must have been dealings between them during the course of the work inconsistent with the enforcement of the terms of the original contract. Sometimes the performance of the original contract has been prevented by the employer, or he has waived any benefit he might have had under it; or, it can be shown that there is an implied contract set up to pay for the work as actually carried out, though the work included in the original contract remains unperformed.

It is obviously fraudulent for an employer to try and avoid payment where it is evident he has given verbal orders for work not falling within the original contract; or, when the work performed is outside the scope of it; or, again, has stood by and seen expenditure going on upon those works and has not stopped them, but has, instead, taken the benefit of them.

THE BUILDING TRADE

EVERYDAY SCIENCE FOR ARCHITECTS AND BUILDERS—XXIII

By A. M. GILES, B.Sc., A.I.Struct.E., A.M.I.E.E.
Diagrams and Illustrations by M. R. Dumville.

Internal Reflecting Prisms.

It has been stated that the critical angle for glass is 42 deg., which means that if the angle of incidence of light, which is attempting to pass from glass to air, is greater than 42 deg. the light will suffer total internal reflection at the surface of separation.

This peculiarity can be made clearer by the study of Figure 67, P and Q. At P is a section of right-angled glass prism, having each of its other angles 45 deg. It is lettered A B C. A cellar or room below the level of the pavement can be lighted by prisms of this kind. The face A B is level with the pavement. Light, which is incident normally on the face A B as shown by the three rays numbered 1, 2 and 3, will continue along the same straight line and fall upon the hypotenuse B C. It is quite easy to prove that the angle of incidence upon this face will be 45 deg. and, since this is greater than the critical angle for glass, the rays will be totally internally reflected along the directions marked I, II and III. We therefore see that a parallel beam of daylight which falls upon the pavement face A B will eventually reach the space below and behind the pavement and illuminate it. The amount of illumination, of course, depends for one thing upon sky-brightness.

In order that the light entering the cellar shall be more scattered than shown at Figure 67 P, the side B C of the prism is very often made slightly curved, as shown at Figure 67 Q. Here, since the incident rays 1, 2 and 3 meet the face B C at different incident angles, which in all cases are greater than 42 deg., the critical angle, they will suffer total reflection at different angles, *i.e.*, along such directions as shown at I, II and III, and therefore they will be more scattered and give a general rather than a concentrated illumination. The method of employing prism for illumination, either scattered or concentrated, is of world wide use in a thousand and one different ways, and there are many firms which specialise in making the necessary fitments.

Colour.

It has been stated previously that ordinary light, called white light or solar light, consists of a series of waves taking place in the ether. Sir Isaac Newton (1642-1727) discovered that a beam of white light, after having passed through a glass prism, was decomposed or analysed into a series of coloured lights. These were allowed to fall upon a white screen and form a band of colours having red and violet ends. This band of colours was called a spectrum. Newton divided the spectrum into sover parts, viz., red, orange, yellow, green, blue, indigo and violet, and these were commonly called the seven primary colours. The decomposition of white light into its constituent colours was called dispersion. Newton later proceeded to verify his discovery by synthesis. He took another glass prism and allowed the coloured lights to fall upon one of its faces. Upon emergence from the other face of the prism it was seen that the colours had re-combined to form white light again.

To reproduce Newton's experiment is quite a simple matter, and Figure 68 should explain how this can be done.

A B C represents a section of a triangular glass prism. P Q is a beam of white light travelling in the direction of the arrow-head and falling upon the face A B of the prism. Upon emerging from the face A C and being allowed to fall upon a screen S S, it was found that the light had been decomposed and that the colours were bent towards the base B C of the prism, the red colour least and the violet colour most refracted. The position of the colours between the red and the violet is marked by the initial letters of the colours as shown. The divided rectangle on the right-hand side of Figure 68 gives an approximate idea of the appearance of the spectrum on the screen S S. The different colours do not occupy equal spaces in the

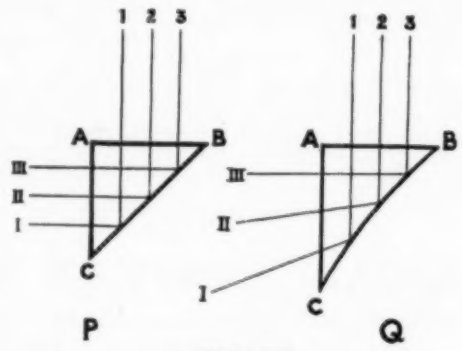


FIG. 67.

spectrum. There is a gradual passing from one colour to the next, and it is noticed that the predominating colours are red, green and blue-violet.

Wave-length.

Since Newton's time very much research work has been done, and among the results of later discoveries is the fact that each light colour has its own particular wave-length. Now a wave-length is the distance from the top of one wave, called its crest, to the crest of the next wave. As we all are thoroughly familiar with water waves, we undoubtedly have noticed that the lengths of waves vary from those of the ripples on the

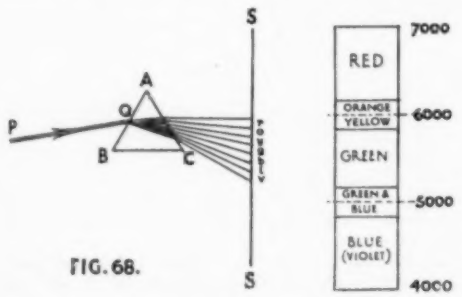


FIG. 68.

sea shore to those of the great ocean rollers, yet the combination of all the different wave-lengths make up the continual disturbance of the surface of the oceans. Though the analogy is not particularly good, it may help us to appreciate that white light is the combination of a number of coloured lights, each of which has its own particular wave-length. These wave-lengths, however, are so tiny that in order to measure them a very tiny unit has to be used. It is called the "Angström" unit, or "the tenth-metre," and its length is one ten thousand millionth part of a metre. The wave-length of red light is 7,000 of these units, which is equivalent to 0.00007 centimetre, while that of violet light, the other end of the visible spectrum, is 4,000 tenth-metres, or 0.00004 centimetre.

Although the wave-lengths of these colours are very tiny we notice that that of red light is very nearly twice that of violet light. Referring again to Figure 68, the numbers shown to the right of the spectrum rectangle are the wave-lengths of the different colours. It should also be noticed that red light having the longest wave-length is least refracted, while violet light having the shortest wave-length is most refracted. Beyond each end of the visible spectrum it is known that there are rays of other wave-lengths, *e.g.*, outside the red end there are the radiant heat rays, and outside the violet end there are the ultra-violet rays. Mention of both kinds has been made in previous articles.

Colour of Transparent Bodies.

In the above experiment, if a piece of red glass is held between the white light and the prism or between the prism and the screen, it will be seen that red is the only colour of the spectrum which is left, *i.e.*, the piece of red glass has stopped or absorbed the other colours and allowed only the red to pass through it. Similarly if the piece of red glass is replaced by a piece which is dark blue, all the colours except the blue will be absorbed, while the blue will be transmitted and be the only colour of the spectrum left. From this it may be concluded that the colour of a transparent body is decided by the coloured light that it transmits. The glass is red because it transmits red light and absorbs the others, or it is blue because it transmits only blue and absorbs the rest. Again it follows quite naturally that if the two pieces of glass, *i.e.*, the red and the blue, be put together between the prism and the screen, no light at all will be transmitted.

Light Filters.

A light filter is a transparent body or medium which will absorb lights of certain wave-lengths and transmit others. It is possible to purchase a piece of prepared glass which will transmit the wave-lengths between 4,000 and 5,000 units and absorb the rest. It would be called a violet-blue, or blue-violet filter. One that transmits wave-lengths between 5,000 and 6,000 units would be a green filter, and one that transmits wave-lengths between 6,000 and 7,000 units would be a red filter. It is customary nowadays to look upon these three colours, viz., blue-violet, green and red as the primary colours, and, as will be seen from the diagram of the spectrum, they are the predominating colours. It is possible to prepare filters that transmit other combinations of wave-lengths and consequently other shades of colours. Vita-glass, which was mentioned in a previous article, is a specially prepared glass which, in addition to white light, will transmit waves of less than 4,000 units in length, *i.e.*, those outside the visible spectrum beyond the violet end, which are called ultra-violet rays. These are also called the actinic rays, or chemically active rays. A photographic plate or film is particularly sensitive to them, and, for the illumination of dark rooms therefore, *i.e.*, rooms in which plates or films are developed, it is necessary to use a light filter such as red glass which will only transmit waves of 6,000 to 7,000 units in length, while absorbing all those of shorter wave-length.

Bequest of Pictures to Coventry.

By his will, Mr. William John Wormell, of Coventry (whose estate is proved at £47,961), left all his pictures and drawings deposited in the Free Library to the Corporation of Coventry.

THE RATING AND VALUATION (APPORTIONMENT) BILL

THE text of the Bill has now been issued which is to form part of the Budget scheme to relieve certain hereditaments connected with agriculture and industry from the whole or some portion of the rates. The Bill is entitled "A Bill to make provision with a view to the grant of relief from rates in respect of certain classes of hereditaments, for the distinction in valuation lists of the classes of hereditaments to be affected, and the apportionment in valuation lists of the net annual values of such hereditaments according to the extent of the user thereof for various purposes." The extent of the relief to be granted is not dealt with in this Bill, the object of which is only to define those hereditaments which will be the subject of relief.

The classes of hereditaments to be dealt with are (1) agricultural hereditaments, (2) industrial hereditaments, and (3) freight transport hereditaments, and the matter of the greatest importance at this stage is to see how those three classes of hereditaments are defined.

Agricultural Hereditaments.

With regard to agricultural hereditaments the Bill presents no great difficulties. The definition of agricultural land follows closely the definition we set out in our article on the Rating and Valuation Act, 1925, in our issue for May 25, with this addition, that it includes "land used for a plantation or a wood or for the growth of saleable underwood," and now we may say that in the definition we gave "market gardens" were accidentally omitted by us. "Agricultural buildings" are defined as "buildings other than dwelling-houses occupied together with agricultural land or being or forming part of a market garden, and in either case used solely in connection with agricultural operations thereon." This definition is precisely the same as the description of such buildings contained in Schedule II Part II of the Rating and Valuation Act, 1925, and in this connection it may be here said that when the Bill refers to the principal Act that means the Rating and Valuation Act, 1925, in relation to places outside London, but the Valuation (Metropolis) Act, 1869, in relation to London.

Industrial Hereditaments.

We imagine that it is in connection with the second class of hereditaments—industrial hereditaments—that the main controversy will arise, and it is unsatisfactory in that it involves considerable reference to other Acts of Parliament.

These hereditaments are defined in Clause 3. Sub-clause (1) provides that "the expression 'industrial hereditament' means a hereditament (not being a freight transport hereditament) occupied and used as a mine or, subject as hereinafter provided as a factory or workshop," provided that it shall not include a hereditament occupied and used as a factory or workshop if it is primarily used and occupied for the following purposes or for any combination of such purposes: (a) the purposes of a dwelling-house; (b) the purposes of a retail shop; (c) the purposes of distributive wholesale business; (d) purposes of storage; (e) the purposes of a public supply undertaking; (f) any other purposes whether or not similar to any of the foregoing which are not those of a factory or workshop. Subsection (2) provides: "For the purposes of this Act any place used for the housing or maintenance of road vehicles shall, notwithstanding that it is situate within the close curtilage or precincts forming a factory or workshop, and used in connection therewith, be deemed not to form part of the factory or workshop, but save as aforesaid the expressions "factory" and "workshop" have respectively the same meaning as in the Factory and Workshops Acts, 1901 to 1920."

This legislation by reference to the Factory and Workshops Acts appears to us particularly unfortunate at the present time because the amendment of those Acts has been promised for some time, and if the amending Bill follows at all the lines of that introduced in 1924, as we showed in our article of September 19, 1924, the definitions in that Bill by the omission in the leading definition of the use in certain "factories" of steam, water or other mechanical power appeared greatly to extend the meaning of the word "factory." But in any case, the definitions of "factories" and "workshops" are so wide in the existing Acts that it may be doubted whether they do not include premises and processes carried on therein for which no case could be made out for relief from rating under the scheme outlined in the Budget.

The above Clause (3) contains definitions of the words "mine," "Public Supply undertaking," and "retail shop."

Freight Transport Hereditaments.

Freight transport hereditaments are defined in Clause 5 Sub-clause (1) as meaning (a) a hereditament occupied and used wholly or partly for railway transport purposes as part of (i) a railway undertaking carried on by a railway company for which a schedule of standard charges has been settled under the Railways Act, 1921, or to which such a schedule is for the time being applied under Section 33 of that Act, being an undertaking whereof the railway is used for the conveyance of merchandise otherwise than by passenger train or carriage; and (ii) a light railway undertaking carried on by a light railway company, being an undertaking whereof the light railway is used as a public railway for the conveyance of merchandise otherwise than by passenger train or carriage. (b) A hereditament occupied and used wholly or partly for canal transport purposes as part of a canal undertaking whereof the canal is used for the conveyance of merchandise. (c) A hereditament occupied and used wholly or partly for dock purposes as part of a dock undertaking whereof a substantial proportion of the business is concerned with the shipping and unshipping of merchandise.

There is a proviso to this subsection that a hereditament primarily occupied and used as offices for, or for purposes ancillary to, the general direction and management and control of a railway, canal or dock undertaking shall not be deemed a freight-transport hereditament.

The above definitions appear to define the character of the undertakings, but not the operations carried on, for although the railway undertaking must be one "whereof the railway is used for the conveyance of merchandise otherwise than by passenger train or carriage" by subsection (2) (a) "railway transport purposes" are defined as meaning all or any of the following purposes, that is to say, "All purposes connected with the conveyance or transport by railway of passengers and their luggage, or of carriages, parcels or merchandise, or connected with the making, reconditioning and repair of locomotives, rolling stock or railway material, or the maintenance of the way and works." Similarly, although the canal must be used for the conveyance of merchandise, "Canal transport purposes" are defined in subsection (2) (b) as "all purposes connected with the conveyance or transport by canal, or by a railway forming part of a canal undertaking, of passengers and their luggage, or of carriages, parcels or merchandise, or connected with the maintenance of any way or works forming part of such undertaking." And although a dock must be an undertaking whereof a substantial proportion of the business is concerned with the shipping or unshipping of merchandise, by paragraph (c) "Dock purposes" are defined as "All purposes connected with the shipping or unshipping at a dock of passengers and their luggage, or of carriages, parcels or merchandise, or the conveyance thereof by a railway forming part of a dock undertaking, or connected with the maintenance of any way or works forming part of such an undertaking, or connected with the provision of accommodation for the reconditioning or repair of ships."

Subsection (3) defines the expressions "Canal undertaking," "dock," light railway," "light railway company," "merchandise," and "railway company," but it is unnecessary to set out those definitions here.

We have thus far only attempted to show what classes of hereditaments are brought within the ambit of the Bill, but it now remains to be seen how they are to be entered in the valuation lists, which under clause 1, subclause (2) are to come into force after the first day of October, 1929.

Entries in Valuation Lists.

The entries to be made in the valuation lists as regards Industrial Hereditaments are dealt with in clause 4, whilst Transport Hereditaments are dealt with in clause 6, and it is here that some complication will arise as regards apportioning the net annual values between portions used for industrial or transport purposes and portions used for other purposes, and the method by which this is to be effected is prescribed in the First Schedule under clause 1, subclause (3), which provides "For the purpose of enabling valuation lists which will be in force on October 1, 1929, to be brought into conformity with this Act, the provisions set out in the First Schedule shall have effect."

Industrial Hereditaments.

Clause 4, subclause (1) provides "In every valuation list every industrial hereditament occupied and used wholly for industrial purposes shall be shown as so occupied and used, and as respects every such hereditament occupied and used partly for industrial purposes the net annual value thereof shall be shown in the prescribed manner as being apportioned between the occupation and user of the hereditament for industrial purposes and the occupation and user for other purposes."

Subclause (2) then provides "For the purposes of determining in what proportions an industrial hereditament is occupied and used for industrial purposes and for other purposes respectively, the following provisions shall have effect—(a) The hereditament shall be deemed to be occupied and used for industrial purposes except in so far as any part thereof is under this Act or under the enactments relating to the regulation of mines, factories and workshops, to be deemed neither to be nor to form part of a mine, factory or workshop," then by paragraph (b) it is provided that where the part of the net annual value of a hereditament attributable to other than industrial purposes does not exceed 10 per cent. of the part attributable to industrial purposes, then the hereditament is to be treated as if it were occupied and used wholly for industrial purposes, and that where the part attributable to other purposes does exceed 10 per cent., the part attributable to other purposes shall only be treated as attributable to those other purposes in so far as the 10 per cent. is exceeded.

The extreme complication of this apportionment for the purposes of entries in the valuation lists is apparent on the face of the provisions we have just set out, as it will entail the consideration of whether any part of the undertaking does not fall within the complicated series of statutes relating to mines, factories and workshops, but the difficulty may be more apparent on paper than it will be in practice.

Freight Transport Hereditaments.

Then as regards the entries to be made in the valuation lists as to freight transport hereditaments clause 6 sub-clause (1) pro-

vides in the same terms as clause 4 relating to industrial hereditaments that the hereditament shall be shown to be used wholly or partly for transport purposes, and that the net annual value shall be apportioned between the parts. Clause 6 sub-clause (2) then provides that where a freight transport hereditament is occupied and used for more than one transport purpose the proportions of the net annual value attributable to the several transport purposes shall be distinguished and sub-clause (3) then provides that for the purpose of determining in what proportions a freight transport hereditament is used for transport services and other purposes the following shall not be deemed transport purposes, that is, if the hereditament is occupied and used for the purposes of a dwelling house, hotel, or place of public refreshment, or of providing warehouse accommodation for merchandise not in the course of transit, or of the housing or maintenance of road vehicles.

The Schedule.

The First Schedule contains the provisions by which the valuation lists are to be brought into conformity with this Bill.

Our space will not allow us to touch upon this Schedule in any detail. Objection, no doubt, will be taken to the important part "the revenue officer" plays in it, an objection that will probably be met by the assertion that as the Treasury find the money they should have a voice in the assessments. It is sufficient to say here that the rating authority has to prepare a preliminary draft special list showing the hereditaments in respect of which, after due notice, claims have been received, and the net annual value thereof, and in the case of agricultural hereditaments also the gross value, grouped under the three headings of hereditaments brought within the Bill, and in the case of industrial and freight transport hereditaments showing the apportionment made according to whether they are used partly for other purposes. This list is to be sent to the revenue officer for his consideration, together with the forms and claims received, and if he considers that the net annual value entered in respect of any hereditament is excessive or differs from any other conclusions arrived at by the rating authority he and the rating authority shall consult together. The next step is for the rating authority to prepare a special draft list, and matters agreed in the above consultation shall be entered in that list as so agreed, but where there has been disagreement the views adopted by both parties shall be set out and the list so prepared is then deposited, and a copy thereof with the relevant forms of claim be transmitted to the assessment committee. The assessment committee shall consider the list, and when approved shall send the list to the rating authority. The provisions of the principal Act as to the preparation, deposit, inspection and revision of draft lists and the making of objections and appeals against decisions, and the final approval of valuation lists and inspection thereof apply to these draft special lists and special lists subject to the foregoing provisions in the schedule and the following provisions. (a) Where the particulars with respect to any hereditament entered in a draft special list whether by agreement between the revenue officer and the rating authority, or at the instance of either of them differ from the particulars claimed in the claim, or if a claim to have any hereditament inserted in the draft list has been rejected the rating authority shall give the claimant notice. (b) In so far as the particulars entered in a draft list have been agreed between the rating authority and the revenue officer, or where a claim has been rejected in pursuance of such an agreement the assessment committee shall not have power to alter those particulars or to insert the hereditament, otherwise than in determining an objection. (c) In so far as the particulars have not been agreed as above the committee shall consider those particulars, and after giving the rating authority and the revenue officer and the occupier an opportunity of being heard, and calling witnesses, shall enter in the list such particulars as they think proper, and for all purposes (including the right of appeal to quarter sessions) such consideration by the committee shall be deemed to be the consideration of an objection and their decision the decision of an objection.

It may be noticed that the revenue officer is to have the same right of entering, surveying and valuing any hereditament as a person duly appointed by the rating authority, and to have the same rights with respect to receiving notice of and opposing objections to a list, and with respect to appealing and receiving notices of and resisting appeals as the occupier of a hereditament.

If the revenue officer was excluded from the Act of 1925 it will be observed, if the Bill passes into law as it stands, he has "come into his own" in this measure. We note that on the second reading of the Bill, which took place after this article was in proof, the Minister of Health stated that the revenue officer was not a permanent institution, but that he would appear only in relation to the provisional valuation lists, and his functions would end on October 1, 1929. The above is only an imperfect survey of the main provisions of this Bill.

NATIONAL ASSOCIATION OF BUILDING SOCIETIES

THE annual conference of the National Association of Building Societies, held at Torquay on Wednesday, Thursday, and Friday, May 30, 31, and June 1, was attended by a record number of delegates from all parts of the country, about three hundred in all, representing over a million and a half members. The Mayor, Mr. C. W. Hore, welcomed the conference to Torquay, and Alderman J. R. Hogg, J.P. (North Shields), returned thanks.

The new president, Viscount Cecil of Chelwood (who was unable to be present), in a letter which he addressed to the conference, said there was no feature in their social system of which we had greater reason to be proud than our building societies. They constituted a brilliantly successful application of the principle of co-operation, combined with thrift in its best sense.

The chairman, Mr. (now Sir) Enoch Hill, managing director of the Halifax Building Society, said they were meeting in Torquay in circumstances which they should regard as highly satisfactory. So far as delegates were concerned they had a record conference. They represented one and a half millions of people, and they had more societies in their association than ever before: and as their financial position was also good they could face the future with every confidence. Continuing, the speaker said that the policy of subsidising the building of houses under present circumstances was pernicious, not only because it led to extravagance, but because it did not provide the houses which were most urgently needed, namely, comparatively small houses for the occupation of small families and workers whose wages did not enable them to pay the high rents required for houses built by local authorities at public expense on the twelve per acre plan. He considered that if the 178,000 houses built under the Housing Act of 1919 were going to cost the country £178,000,000, as was stated recently in Parliament, that sum, if devoted to the provision of small houses, could have been much more economically and efficiently spent in relieving the present house shortage. It was appalling to contemplate, as recently stated by the Minister of Health, that the annual loss falling upon the public funds in respect of each one of these houses amounted to about £45 a year, of which £39 10s. fell upon the Exchequer and £5 10s. came out of the rates. Of the sum of £20,774,025, being the complete vote for the Ministry of Health, practically one-half, namely, £10,700,000, was provided for housing and grants. That figure showed an increase over the corresponding figure of last year of over £1,000,000. It had been officially stated on behalf of the Ministry that out of the large sum provided in this year's estimates nearly £7,000,000 was for payments in respect of houses built under the Act of 1919. One of the most expensive commodities of the present day was the commodity of government, and the cost of both national and local government constituted one of the greatest burdens and handicaps on industrial and private life. The less the Government and local authorities interfered with housing, as with any other necessity, the better it would be for the public, and the sooner there would be a return to an economic and sufficient supply. The fact that up to March 31 last 1,102,000 houses had been provided since the Armistice was a testimony more to private enterprise than to public activities. Although public bodies were favoured not only by direct subsidies, but by many indirect municipal activities and services, and the private builder had been faced by unfair competition, of the number of houses built 690,000 were by private enterprise and 412,000 by local authorities. The large number of houses built and being supplied at the present time were, however, unfortunately only catering for one section of home seekers, and in many cases the houses built by public assistance were occupied by persons of comparatively good incomes who ought to be encouraged, as they were by the facilities of building societies, to provide houses of their own without being a burden upon the public. Since the passing of the 1923 Act loans and advances by building societies had been sanctioned and supported by guarantees of local authorities to a total amount of £54,500,000. He could not understand why the Government should concern itself with providing a part of the cost of superior artisans' houses, because there was no more economic grounds for providing houses than for providing food, clothing, and other necessities. Every measure of subsidy and restriction had increased the housing shortage and led to extravagance and high prices. He urged that there should be a return to free trade in housing, as the only economic method of solving the housing shortage. The building societies of the country had assisted in the creation of not less than 2,500,000 owners of homes, and it was within the mark to say that 600,000 men and women were at the present moment gradually redeeming the homes in which they lived from mortgage finance and making them their own unfettered and unburdened properties. What would happen when the housing shortage was fully met, so far as it could be met, by private enterprise? It was hardly wise to venture upon a forecast as to what would happen when the Rent Restriction Act was removed. They might anticipate that its immediate effect would be to strengthen temporarily the position of the building societies and renew for a little time an artificial stimulus to the operations of the societies. It would be worth a good deal, however, not to building societies alone, but to the Government as well, to get down once more to a solid foundation on which the interplay of known economic forces could be more accurately judged.

Upon the proposition of the chairman, seconded by Mr. T. R. Chandler (London), the report and balance sheet were unanimously adopted.

The Executive Committee was elected as follows:—Messrs. A. W. Betts (London), W. Harvey (Burnley), L. G. Hodgson (Isle of Thanet), D. Lewis (Cheltenham), C. Marshall (London), and J. Riley (Bradford).

NATIONAL HOUSING AND TOWN PLANNING

THE annual conference of Local Authorities in England and Wales met on Thursday, June 14, at the County Hall, Westminster, to consider the administration of the 1923, 1924, and 1925 Housing Acts, the 1926 Housing (Rural Workers) Act, and the 1925 Town Planning Act, with especial reference to :—The administration of the financial provisions of the Housing Acts of 1923 and 1924, as amended by the Housing Acts (Revision of Contributions) Order, 1926; the problem of the slum and the procedure relating to improvement and reconstruction schemes; the rural housing problem and the administration of the Housing (Rural Workers) Act, 1926; and town and regional planning problems, including the preservation of rural England.

In the course of a memorandum upon the present housing situation in England and Wales (taken up to April, 1928) Mr. John G. Martin, Secretary of the Council, said that in the first place it was essential to remember that a statistical return of post-war housing progress was apt to be misleading unless it was carefully analysed in the light of such factors as the estimated shortage of working-class dwellings in 1919, the normal annual requirement of new houses, and the number of houses that had been built for sale and letting purposes respectively. The grand total of 1,065,207 houses erected in England and Wales since the end of the war (including 196,589 houses completed with State assistance during the year 1927) represented a truly remarkable achievement, but if the total was subjected to close analysis it would be revealed that very much still remained to be done.

Under the Housing Act of 1919 a general survey was presented to the Local Government Board, and the returns then made by the Local Authorities showed a net need of 796,248 working-class houses for England and Wales. Moreover, it was generally agreed by responsible authorities that about 100,000 new houses were required each year to meet the growth and expansion of our population and to replace those houses which had fallen into complete disrepair. In the absence of a recent survey of housing requirements, estimates as to the present national shortage were necessarily somewhat empirical. Apart, of course, from the need for replacing tens of thousands of slum dwellings, it might perhaps be taken in round figures as at least 600,000 houses, and while some might estimate the deficiency to be slightly smaller or larger, it would not be denied that the dimensions of the problem were such as to demand our serious attention and unflagging energy.

Recognising the indissoluble relationship between health and housing, Parliament in 1919 imposed upon Local Authorities the statutory obligation of providing houses for the working classes where these were not provided from other sources. Since that date the situation had been in some measure relieved by the Addison, the Chamberlain, and the Wheatley Housing Schemes, but to-day it was undoubtedly to the provisions of the Wheatley Housing Act of 1924 that we must turn in our attempt to make further housing progress.

The rates of subsidy under both the 1923 and 1924 Acts were reduced by the Housing Acts (Revision of Contributions) Order, 1926, and the attitude of the National Housing Council towards that Order and the urgent representations made to the Government thereon will doubtless be remembered.

Now that the Order has been in operation for several months, it would be of service to consider its effect on the output of houses and also on employment in the building industry. There had been a very marked falling off in the number of houses under construction under both Acts (from 102,864 at March 1, 1927, to 51,306 at March 1, 1928), and also in the number of houses authorised but not started (from 126,611 in 1927 to 93,186 in 1928). There facts would, of course, be reflected in the total number of houses completed during the current year.

As regarded the number of unemployed workers in the different branches of the building trade at various comparable dates, there had been a further serious increase in the number of unemployed building trade workers during the past year (from 116,607 at January 24, 1927, to 137,401 at January 23, 1928), and it should be borne in mind that the additional financial burden thereby imposed on the Unemployment Insurance Fund must in some measure offset any saving effected by the reduction in the housing subsidy. The Conference felt it to be most desirable that the 1924 Act should be continued in operation for several years. The Chamberlain Act had been very successful in encouraging private enterprise to build small houses for sale, but the demand for that class of house had now practically ceased. On the other hand, houses for letting purposes were urgently needed in every centre of population, and it was abundantly clear that hundreds of thousands more working-class houses must be constructed before the nation could hope to abolish the evils of overcrowding and to sweep away the black spots of our cities. The following resolution was then put to the Conference :—" This Conference is of opinion that the prevailing uncertainty as to the future rates of the housing subsidy adds to the difficulties of Local Authorities desiring to embark on further building schemes, and accordingly calls upon the Minister of Health to give a specific undertaking that at least 12 months' notice will be given before any further reduction of the subsidy comes into operation."

Following an address by Mr. F. M. Elgood, F.R.I.B.A., on " Questions Raised in Recent Memoranda on Slum Clearance Schemes," the following resolutions were submitted to the Conference :—

THE SLUM PROBLEM.—" That, in the opinion of this Conference, Local Authorities should take immediate steps to prepare comprehensive programmes for dealing with slum areas, so that as soon as the pressing shortage of housing accommodation has been met, the demolition of unfit houses can be undertaken and improvement and reconstruction schemes proceeded with."

THE RURAL HOUSING PROBLEM.—" That, in view of the urgent need for better housing conditions in many of the rural areas in England and Wales, this Conference is of opinion that Rural District Councils should accelerate their building schemes under the 1924 Act and should especially provide new houses for all families at present living in dwellings which, in the opinion of the Medical Officer of Health, are unfit for human habitation and should be condemned."

" That this Conference requests the Minister of Health to call upon every Rural District Council to furnish a return of all low-standard working-class dwellings in its area, distinguishing between those which are capable of being reconditioned and those which, by reason of their total unfitness, should be condemned."

TOWN PLANNING.—" That this Conference welcomes the repeated statements of the Minister of Health as to his intention to propose the amendment of the Town Planning Act, in order that it may apply to all land, whether built upon or not. The Conference considers that the removal of this disability (which is peculiar to this country) is long overdue and requests the Prime Minister to afford Parliament an early opportunity of passing the necessary amending legislation."

NEW BUILDINGS IN LONDON

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned.

Barnes.—ENLARGEMENT.—The large clubhouse at Mill Lodge, S.W.15, owned by the Harrodian Amateur Athletic Association, is to be reconstructed and enlarged. Plans have been prepared by Mr. L. de Blanc, L.R.I.B.A., architect to Messrs. Harrods, Ltd.

Castlebar.—WARD.—Plans for a new ward at " St. David's Home," Castlebar-hill, Ealing, have been prepared by Mr. H. W. Binns, architect, 15, Soho-square, W.1.

Clapham.—ALTERATIONS.—Extensive alterations are to be effected to premises in Clapham High-road, S.W., for Messrs. Shoe Rebuilders, Ltd. The plans have been prepared by Messrs. T. P. Bennett and Son, F.R.I.B.A., 41, Bedford-row, W.C.1.

Ealing.—CHURCH.—In Northfield-avenue, Ealing, a new Wesleyan Church is to be erected to the plans of Messrs. Smee & Houchin, architects, " Fleet House," Fleet-street, E.C.4.

Eltham.—EXTENSIONS.—Messrs. George Mence Smith, Ltd., provision merchants, of Peckham, S.E., are considering the rebuilding and extension of their branch showrooms in Eltham High-street.

Finchley-road.—FLATS.—The London Housing Society, Ltd., of 11b, Judd-street, W.C.1, are erecting 92 flats in Finchley-road, N.W.

Fleet-street.—OFFICES.—New offices are to be built on a site in Fleet-street and Bouverie-street, with a frontage to Bolt in Tuncourt, E.C.4, for the London, Midland and Scottish Rly. Co. The builders are Messrs. G. Godson and Sons, Ltd., Kilburn-lane, W.10. The plans have been prepared by the Chief Architect, Euston Station, N.W.1.

Gracechurch-street. — REBUILDING. — The City of London Real Property Co., Ltd., 159, Fenchurch-street, E.C., propose to rebuild their large block of offices at Nos. 51-54, with a frontage in Talbot-court. The plans have been prepared by Mr. A. Sylvester Sullivan, F.R.I.B.A., 158. Fenchurch-street, E.C.

Hendon.—HOUSES.—Messrs. Besley and Spyer, of Finchley-road, N.W., have sold a large portion of the Hancock estate to Messrs. Haymills, Ltd., builders, 1, Grand-parade, Wembley Park, who propose to build a considerable number of houses.

Lewisham.—ENLARGEMENT.—An expenditure of about £8,000 is proposed upon the enlargement of St. Saviour's Church in Lewisham High-street, S.E., and the erection of a new presbytery. The plans have been prepared by Messrs. Alexander Symon and Kelly, 12, Hart-street, Bloomsbury, W.C.

Moorfields.—CONVERSION.—The City of London College have acquired premises in Moorfields, E.C.2, which are to be converted into additional classrooms, etc. The work will be carried out by Messrs. Bovis, Ltd., 43, Upper Berkeley-street, W.1, under the supervision of Lt.-Col. F. Hammond, F.S.I., L.R.I.B.A., 20, Paper-street, E.C.

Oxford-street.—OFFICES.—The Gas Light and Coke Co., Ltd., Horseferry-road, S.W., have purchased the important site at the corner of Oxford-street and Portman-street, W.1, where it is proposed to build new branch showrooms and offices.

Villiers-street. — RECONSTRUCTION. — Plans have been approved for the reconstruction of the Villiers-street Cinema, W.C.2. The builders are Messrs. Bovis, Ltd., 43, Upper Berkeley-street, W.1, who will also carry out the decorative work. Sub-contracts include Messrs. John Blaikie and Sons, Ltd., warming and ventilating; Messrs. Arthurs, electric wiring. The architect is Mr. G. Thrale Jell, A.R.I.B.A., 20, Hanover-square, W.1.

Wembley.—HOUSES.—Messrs. Comben & Wakeling, builders, 20, East-lane, Wembley, are to erect 48 houses in Oldborough-road, Baxford-road and Blockley-road, and Carlton-avenue; also 32 houses in Holt-road.

RATES OF WAGES IN THE BUILDING TRADE

[Every endeavour is made to ensure accuracy but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Accrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aldershot	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Alfreton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Alnwick	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Altrincham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ashford Kent	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Ashington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ashton-under-Lyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Aylesbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Aylsham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Banbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Barnsley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barnstaple	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Barrow-in-Furness	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Barry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Basingstoke	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bath	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bedford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Berwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bexhill	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Birmingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bishop Auckland	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Blackburn	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Blackpool	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bolton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bournemouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bradford	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bradford-on-Avon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Braintree	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bridlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Brighton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bristol	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bromsgrove	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bromyard	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bungay	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Burnley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Burton-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Bury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Buxton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cambridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Canterbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Cardiff	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Carlisle	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chatham	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Chelmsford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chesterfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Chorley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cirencester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Clacton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Cranbrook	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Crewe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cromer	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Darlington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Deal	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Denbigh	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Derby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Devizes	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Dewsbury	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Doncaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Dorchester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Dorking	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Dovercourt	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Driffield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Droitwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dudley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Durham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Eastbourne	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
E. Glam. (Mon. Val.)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ely	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Exeter	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/5½	1/2
Exmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Fakenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Felixstowe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Frome	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Glossop	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Godalming	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Goole	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Gosport	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grantham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Great Yarmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Grimsby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Guildford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Halifax	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harpenden	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hartlepools	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Harwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hatfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hednesford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Hereford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Herne Bay	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hertford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hitchin	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hoddesdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Holt	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Huddersfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hull	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Hunstanton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Huntingdon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Isle of Wight	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Ipswich	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Keighley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
King's Lynn	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lancaster	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leicester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Leighton-Buzzard	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Lichfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lincoln	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Littlehampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Liverpool	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Llandudno	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Llanelly	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
London:								
12 m. radius	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/4
12-15 m. radius	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/3½
Loughborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Lowestoft	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Macclesfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Maidstone	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Malvern	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Manchester	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Mansfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Margate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Market Harb'rough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Matlock	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Melton Constable	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Melton Mowbray	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Middlesbrough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newark	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newbury	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Newcastle-on-Tyne	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Newcastle-ur-Lyme	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
New Forest	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newport, Mon.	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Nottingham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Nuneaton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oldham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Paignton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Peterborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Plymouth	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Portsmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Preston	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Ramsgate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redcar	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Redditch	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Reigate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Retford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ripon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochdale	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Rochester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Rugby	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Saffron Walden	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
St. Albans	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
St. Helens	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sawbridgeworth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Saxmundham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Scarborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Sevenoaks	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sheffield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Shrewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sittingbourne	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Southport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
South Shields	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stevenage	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stockport	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stockton-on-Tees	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stoke-on-Trent	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Stourbridge	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stourport	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stowmarket	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Stratford-on-Avon	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stroud	1/5	1/5	1/5	1/5	1/5	1/5	1/4½	1/0½
Sunderland	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swaffham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Swansea	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Swindon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/4½	1/1½
Tamworth	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Taunton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Thetford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Torquay	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Totnes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4	1/0½
Trowbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Tunbridge Wells	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Uttoxeter	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wakefield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Walsall	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wallsend	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warminster	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Warrington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Warwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wells (Norfolk)	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Welwyn Gar. City	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
West Bromwich	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Weston-sup.-Mare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Weymouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Whitby	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wigan	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Winchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wisbech	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Wolverhampton	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Woodbridge	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Worcester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worksop	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Worthing	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wrexham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wroxham	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wymondham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/2
York	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½

For rates of wages in the Building Trade in Scotland, see page 1048.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations :—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, ETC.

JUNE 18.

Armagh.—Reconstruction.—Building and reconstruction of premises in William-st., Lurgan, for E.C. J. St. J. Phillips, B.E., 16, Donegall-sq. South, Belfast. Dep. £3 3s.

Bermondsey.—Block of Dwellings.—Erection of, at Dickens estate, Bermondsey, for the L.C.C. Architect to the Council, The County Hall (Room No. 3), Westminster Bridge, S.E.1. Dep. £2.

Bilston.—School.—In Loxdale-st., for E.C. Joynson Bros., F.R.I.B.A., Butcroft, Darlaston. Dep. £2 2s.

Bingley.—Renovations.—Interior at Bingley Training College, of College, Gymnasium Block, and "Acland" Hostel, for West Riding E.C. Education Department, County Hill, Wakefield.

Carlisle.—Painting.—Also decorating various schools, for T.C. P. Dalton, A.R.I.B.A., Surveyor to E.C., 18, Fisher-st.

Chelmsford.—Accommodation.—Office, etc., at Sandford water works, for T.C. E. J. Miles, B.E. Dep. £1 1s.

Cumberland.—Painting.—Various police stations, for C.C. J. Forster, F.R.I.B.A., County Architect, The Courts, Carlisle.

Ealing.—Houses.—21 on land adjoining distributing station, Pope's-lane, for T.C. J. D. Knight, Borough Electrical Engineer and Manager.

Edinburgh.—Improvements.—For (a) inside and/or outside painting at Abbeyhill (New), Blackhall, Corstorphine, Dairy, Dean, Gilmerton, Granton, Hermitage Park, Gillespie's, Leith Walk, Portobello Secondary, Preston-st., St. Cuthbert's, Torphichen-st., Towerbank, Trinity Academy, Victoria, Willowbrae, and Ramsay Technical schools and cooking centre; (b) removal of galleries to form level floors at Bonnington-rd., Craiglockhart, Dr. Bell's, Leith Academy, Parson's Green, Preston-st., Regent-rd., Sciennes, and Trinity Academy schools; (c) installation of bathrooms in Janitors' houses at Abbeyhill, Albion-rd., Canonmills, Castlehill, Couper-st., James Gillespie's (Junr.) (Marchmont-crescent), and Stockbridge schools, and (d) complete electrical installation for Burdiehouse, North Merchiston, Roseburn, and St. Columba's schools; electrical installation for Janitors' houses at Bonnington-rd., Boroughmuir (49, Viewforth), Canonmills, Craiglockhart, and Royal High schools, for E.C. John Stewart, Executive Officer.

Glasgow.—School.—Temporary school at Knightswood, for E.C. J. Clark, Director of Education. Dep. £2 2s.

Guildford.—Improvements.—Mass concrete river wall of approximate length of 210 feet in connection with Millmead Improvement, for T.C. J. W. Hipwood, B.E. and S.

Halifax.—Decorating.—At Friendly Trade Societies' Club, St. James's-rd. L. T. Wormald, Sec.

Kennoway.—Houses.—20, for Kirkcaldy D.C. G. B. Deas, architect, Central-chambers.

Kingston-upon-Thames.—Non-parlour type Houses.—Erection of 60, for the Royal B.C. B.S., Municipal Offices, Kingston-upon-Thames. Dep. £1 1s.

Leeds.—Painting.—For (a) painting and cleaning of schools; (b) electric lighting of schools; (c) conversion of existing building into handicraft and domestic science centre at Edgar-st., York-rd., for E.C. J. Graham, Director of Education, Education Offices.

Littlemore.—Redecorating.—For (1) redecorating and alterations to recreation hall, and (2) erecting cinema operating room, at Hospital. Engineer.

Liverpool.—Pavilion.—Sports pavilion, etc., at elementary schools playing field, Long-lane, Wavertree, for T.C. Land Steward and Surveyor.

Lochore.—Houses.—16 3-roomed houses, for Kirkcaldy D.C. G. B. Deas, architect, Central-chambers, Kirkcaldy.

Lumphinnans.—Houses.—14 semi-detached cottages, for Kirkcaldy D.C. G. B. Deas, architect, Central-chambers.

Lytham.—School.—Secondary school for girls, for School Charities. T. Taliesin Rees & Richard Holt, architects, 64, Rodney-st., Liverpool.

Maltby.—Houses.—For (a) construction of roads, sewers, surface water drains, etc., (b) erection of 32 houses on Heron Field, Grange-lane, for U.D.C. E. and S.

Menston.—Plastering.—In connection with erection of operating theatre at Mental Hospital. H. Topham, Clerk to the Mental Hospitals Board Wakefield.

Northampton.—Conversion.—Of playshed into cookery centre, at Barry-rd. school, for C.B. A. Fidler, B.E. and S. Dep. £1 1s.

Ongar.—School.—Girls' open-air school at West Ham Residential Open-air School, Fyfield (near Ongar), for C.B. John H. Jacques, L.R.I.B.A., Architect to the Committee, 61, West Ham-lane, Stratford, E.15. Dep. £2.

Plymouth.—Decorations.—Internal, of portion of public library, for C.B. J. Wibberley, B.E., S. and A. Dep. £1 1s.

Southend-on-Sea.—Cleaning.—Also painting at various Council schools, for E.C. F. W. Smith, architect to E.C. Dep. £1.

Sunderland.—Alterations.—Structural alterations and fitting up of an extension of electricity sales department, 27, Fawcett-st., for C.B. General Manager, Electricity Offices, Dunning-st. Dep. £1.

Thrapston.—Houses.—6 non-parlour type, at Tichmarsh, for R.D.C. W. A. Lea, 4, Market-hill, Huntingdon.

***Warminster.**—New Cottage Hospital.—At Warminster. Elcock & Sutcliffe, FF.R.I.B.A., Avenue House, 21, Northumberland-av., W.C.2. Dep. £2 2s.

Wath-on-Dearne.—School.—New middle school (to accommodate 380 children) at Brampton Bierlow, near Wath-on-Dearne, for Educational Foundation of George Ellis (1711). C. F. Moxon, architect, 3, Regent-st., South Barnsley. Dep. £2 2s.

Wood Green.—Practical Instruction Centre and Cycle Store.—In Western-rd., for the U.D.C. C. H. Croxford, S., Town Hall, Wood Green, N.22. Dep. £1 1s. to the Treasurer.

York.—Houses.—64 parlour type, adjoining Hull-rd., and 44 non-parlour type in Osbaldwick-lane, for T.C. F. W. Spurr, City E. Dep. £2 2s.

JUNE 19.

Bootle.—Building.—Following works at Infectious Diseases Hospital, Linacre-lane, Bootle: (1) Re-roofing pavilion No. 3 with corrugated asbestos sheeting; (2) providing and laying new floor to pavilion No. 3, for C.B. B.E.

Bootle.—Painting.—Also cleaning interiors of (1) Infectious Diseases Hospital, Linacre-lane; (2) Maternity Home, Balliol-rd.; (3) Corporation Sanatorium, Upfields Farm, Maghull, for C.B. B.E.

Bristol.—Conveniences.—At Alma-rd., Clifton; Lower Maudlin-st. and Old Market-st., Bristol, for T.C. L. S. McKenzie, City E. and S., 63, Queen-sq. Dep. £3 3s.

Castlebar.—Cottages.—4, on Fair-green. Town Surveyor.

Dublin.—Houses.—8, at Griffith-av., Marino, for Corporation. City Architect.

Dublin.—Wiring.—Electric wiring of 40 flat dwellings, Crabbe-lane area, for Corporation. City Architect. **Dep. £1 1s.**

Epsom.—Cottages.—6, at Cobham-rd., Fletcham, for R.D.C. F. A. Pratley, S., Ashley House.

Hornsey.—Repairs, Decorations and Tar Paving.—At the various Schools during summer holidays, for the E.C. A. W. Allen, Sec., Hornsey E.C. Office, 6, Topsfield-parade, Crouch End, N.8.

Leeholme.—Bungalow.—At Leeholme, Secretary, "Welfare," Colliery Office, Leasingthorne, Bishop Auckland.

Londonderry.—Painting.—At Custom House and G.P.O., for Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-sq. West, Belfast.

Nuneaton.—Houses.—9, in Sandon-rd., for Corporation. H. N. Jepson, A.R.I.B.A., Queen's-buildings. Dep. £2 2s.

Southall-Norwood.—Cottages.—Erection of 44 on the brickfields site, for the U.D.C. J. B. Thomson, Housing Architect, Town Hall, Southall. Dep. £2 2s.

Stepney (E.).—Foundations and Retaining Walls, etc.—Construction of at Limehouse Electricity Generating Station, Narrow-st., E.14. Contract No. 304, for the B.C. B.E. and S., Bernard J. Belsher, Municipal Offices, Raine-st., E.1. Dep. £10 (Treasury Notes).

Swinford.—Reconstruction.—Of Swinford ex-R.I.C. Barracks, Co. Mayo, for Office of Public Works. T. Cassidy, secretary, Office of Public Works, Dublin. Dep. £1.

Walthamstow.—Interior and Exterior Renovation in Painting, Distempering, etc.—To various schools, for E.C. H. Prosser, F.R.I.B.A., 263, High-st., Walthamstow, E.17.

JUNE 20.

Blagdon.—Repairs.—Pointing and repairs to tower of St. Andrew's Church. A. J. Pictor, F.R.I.B.A., 14, Queen-sq., Bath.

Carshalton.—Pavilions.—Two portable wooden pavilions, for U.D.C. R. S. Davey, engineer.

Glamorgan.—Painting.—Various schools, etc., for C.C. D. Pugh Jones, County School Architect, County Hall, Cardiff, and W. James Nash, County School Architect, Midland Bank-chambers, Neath.

Hants.—Telephone Exchange.—At Farnborough, for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Ireland.—Building.—For (a) station for the Garda Siochana at Barnaderg, Co. Galway; (b) station for Garda Siochana at Corofin, Co. Galway, and (c) station for the Garda Siochana at Crookstown, Co. Cork, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1 each.

Leicester.—Demolition and Building Work.—Demolition of the existing central wing, and the erection of a new 4-story block, for the Board of Governors, Leicester Royal Infirmary. Pick, Everard, Keay & Gimson, 6, Millstone-lane, Leicester. Dep. £3 3s.

Liverpool.—Tenement Dwellings.—Erection of 46 on the Rankin-st. area, for the Housing Committee. Acting Director of Housing, Municipal Buildings, Dale-st., Liverpool. Dep. £1 1s.

Meelick.—Repairs.—Re-roofing and other repairs to Meelick Church, near Swinford, Co. Mayo. William H. Byrne & Son, architects, 20, Suffolk-st., Dublin.

Newton Abbot.—Sewers.—Construction of roads and sewers in connection with development of estate at Milber, for Development Co., Ltd. Josias C. Beare, A.R.I.B.A., architect and surveyor, 42, Devon-sq. Dep. £2 2s.

Pontardawe.—Additions.—Alterations and additions to Council Offices, for R.D.C. E. D. Jones, A.R.I.B.A. Dep. £3.

Poole.—Building.—Coast protection at Canford Cliffs, including construction of sea wall in reinforced concrete approximately 500 yds. in length, together with groynes, promenade, subsoil drains, rubble walls, and other work incidental thereto, for T.C. E. J. Goodacre, B.E. Dep. £3 3s.

Rhondda.—Painting.—Various schools, for U.D.C. Jacob Rees, architect, Hillside-cottage, Pentre. Dep. £2 2s.

Southend-on-Sea.—Alterations.—At Hamlet Court-rd. schools, for C.B. F. W. Smith, A.R.I.B.A., architect to E.C. Dep. £1.

Stocksbridge.—Fencing.—Provision and fixing of wrought-iron fencing gates, barriers, and stair railings at new school, for West Riding E.C. Education Dept., County Hall, Wakefield.

JUNE 21.

Carmarthenshire.—Engine Shed, Coal Stage and other works, at Pantyffynnon, for the Directors of the G.W. Rly. Engineer, Paddington Station. Dep. £2 2s.

Glasgow.—Fencing.—Works required in connection with Knightswood housing scheme, No. 6 area, viz.:—(1) Iron railings and gates; and (2) chestnut fencing, for Corporation. D. Stenhouse, T.C.

Kilrush.—Reconstruction.—At District and Fever Hospital, for Clare County Board of Health and Public Assistance. R. Dowling, C.E., 1, Bindon-st., Ennis. Dep. £5 5s.

Monaghan.—House.—At Derrymagiagh, Carrickmacross, for Irish Sailors and Soldiers Land Trust. R. E. Beckerson, Chief Clerk, Irish Sailors and Soldiers Land Trust, Dublin. Dep. £2 2s.

Monaghan.—Painting.—External wood and iron work of entire Institution, for Mental Hospital. Joint Committee of Management.

Newtown (Montgomery).—Renovations, etc.—To various schools, for Montgomeryshire E.C. L. Phillips, director and clerk, County Education Offices.

***Slough.**—Extension.—Of the Goods Offices, etc.—At Slough Station, for the directors of the G.W. Rly. Co. Engineer, Paddington Station. Dep. £2 2s.

Stoke-on-Trent.—Renovation.—Also interior decoration of casual wards at London-rd. Institution, for B.G. W. Pendleton, architect, Union Offices.

JUNE 22.

Bodmin.—Adaptations.—Also repairs, etc., including new installation for sewage disposal at Cornwall Mental Hospital, Laninval, near Bodmin, for Committee. County Architect, County Hall, Truro. Dep. £1 1s.

Caithness.—Wiring.—Electrical wiring of 5 schools in Burgh of Wick, for E.C. J. E. MacEwan, engineer, 108, Douglas-st., Glasgow.

Edinburgh.—Constructing.—Tunnel about 500 yds. long, under the foreshore and seabed of the Firth of Forth, together with a shaft on the land and a shaft in the sea, at Portobello, for Electricity Committee. J. & A. Leslie & Reid, C.E., 72a, George-st. Dep. £1.

Lancaster.—Shop.—Branch shop, Willow-lane, for the Lancaster & District Co-operative Society, Ltd. R. W. Jackson, architect and surveyor, 43, Church-st.

Liverpool.—Painting.—Exterior and general repairs to Town Hall, for T.C. Land Steward and Surveyor.

Londonderry.—Repairs.—At H.M. prison, for Government of Northern Ireland. Secretary, Ministry of Finance, 15, Donegall-sq. West, Belfast.

North Foreland.—New Wireless Station.—At North Foreland, for the Commissioners. H.M.O.W., Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

JUNE 23.

Baildon.—Lighting.—Installation of electric lighting at Baildon Woodbottom and Tong Park Council schools. B. Leah, Education Offices, Bingley.

Bristol.—Houses.—24, on St. Anne's housing site, for T.C. L. S. McKenzie, City E. and S., 51, Prince-st. Dep. £1.

Burgess Hill.—Houses.—32, for U.D.C. Architect, Council Offices. Dep. £2 2s.

Chester.—Secondary School.—To accommodate 820 scholars, for the Chester E.C. F. Anstead Browne, F.R.I.B.A., C.A., Newgate-st., Chester. Dep. £5 5s.

Chichester.—Nurses' Home.—At Royal West Sussex Hospital. Whitehead & Whitehead, architects, 18, South-st., Chichester.

Coleford.—Additions.—Alterations and additions to police station, for Gloucestershire C.C. E. S. Sinnot, C.S. Dep. £2 2s.

Halifax.—Conversions.—Of 309 closets at various addresses, for C.B. B.E., Crossley-st.

Haverfordwest.—Painting.—To various schools in county of Pembroke, for Pembrokeshire E.C. O. T. Thomas, County Architect, Haverfordwest.

Ilford.—Painting.—Also renovating Cleveland-rd., Christchurch-rd. and South Park schools, for T.C. H. Shaw, B.E. and S. Dep. £1 1s.

Rothwell.—Houses.—32 scullery houses, for U.D.C. J. Southwart, S. Dep. £1 1s.

Sudbury.—Painting.—Also repairs, at Walnut-tree House, for B.G. F. P. Earee, L.R.I.B.A., 36, Market-hill.

JUNE 25.

Beddington and Wallington.—Houses.—8 brick-built houses in Wandle-rd., Beddington, for U.D.C. S. F. R. Carter, E. and S. Dep. £2 2s.

✱**London.**—Stores, etc.—For the periods of 6 and 12 months commencing August 1, for the Metro. Water Board. Chief Engineer, Offices of the Board (Room 156), 173, Rosebery-av., E.C.1.

Sunderland.—Houses.—32 four-roomed and 32 five-roomed houses at Spark Farm estate, and 12 flats at Whickham-st. East, for C.B. B.E. Dep. £2 2s.

JUNE 26.

Bradford.—School.—Erection of Bolling Secondary school for girls, for E.C. City Architect.

Leeds.—Houses.—50, on Henconner-lane housing estate, for T.C. W. T. Lancashire, City Engineer.

Leeds.—Pavilion.—In Military Field, Roundhay, for T.C. W. T. Lancashire, City Engineer.

Norwood. — Telephone Exchange. — "Livingstone," Church-rd., Norwood, S.E., for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

JUNE 27.

East Ham.—Alterations.—Conversion of play-sheds at the Brampton school, East Ham, into class-rooms, for the B.C. B.E., Town Hall. Dep. £1 1s.

✱**Hendon.**—School.—To accommodate 1,224 children, on the L.C.C. Watling Housing estate, in Hendon, for the U.D.C. James Anderson, E.C., Education Offices, The Burroughs, Hendon, N.W.4.

Husthwaite.—Church.—New Wesleyan church. J. Francis Todd, architect and surveyor, Easingwold.

Manchester.—Heating.—Accelerated low-pressure hot water heating and supply apparatus at "City" Telephone Exchange, Chapel-st., Salford, Manchester, for H.M.O.W. Contracts Branch, H.M. Office of Works, King Charles-st., S.W.1. Dep. £1 1s.

✱**Swansea.**—Mental Hospital.—Erection of, for 700 beds, at Sketty, for the Swansea and Merthyr Tydfil Visiting Committee. H. L. Lang-Coath, clerk, Guildhall, Swansea. Dep. £5.

JUNE 28.

Acton (W.3).—Redecorations and Repairs, Tarpaving, Central Heating.—At various schools, for the B.C. B.E., Municipal Offices, Acton, W.3. Dep. £1 1s., to Boro. Treas.

Arigna. — Alterations. — Also improvements to Catholic Church, Arigna, Co. Roscommon, for Rev. Fr. Meehan, P.P. Ashlin & Coleman, architects, 7, Dawson-st., Dublin.

Keynsham.—Houses.—For (a) 12 semi-detached parlour houses, and (b) construction of about 170 yds. of 9-in. sewer and 120 yds. of 6-in. main drain, on Council's estate at Brislington, for R.D.C. H. W. Argile, building surveyor, 16, High-st. Dep. £1 1s.

✱**Lambeth.** — Underground Convenience. — Construction of, in Rushcroft-rd., Brixton, for males, and conversion of the present underground convenience at the corner of Brixton-rd. into one for females only, for the Lambeth B.C. Osmond Cattlin, B.E. and S., Town Hall, Brixton-hill, S.W.2. Dep. £1 1s.

New Romney.—Fencing.—Of various kinds, for T.C. W. Lamacraft, T.C.

✱**Poplar.**—Flats.—Erection of 6 on a site in Gale-st., Bromley, E.3, for the Poplar B.C. B.E. and S., Council Offices, Poplar, E.14. Dep. £3 3s.

Southampton.—Medical Superintendent's House and Porter's Lodge.—Erection of, at the Mount, Bishopstoke, Sanatorioum, for the C.C. A. L. Roberts, F.R.I.B.A., C.A., The Castle, Winchester. Dep. £1 1s. by cheque payable to the Hants C.C. and crossed "Lloyds Bank, Ltd., Winchester."

JUNE 29.

Knaresborough.—Additions.—Also alterations to King James's Grammar school, for West Riding E.C. Education Department, County Hall, Wakefield.

Newcastle-under-Lyme.—Heating.—Also hot water service in connection with St. John's Hospital, Keele-rd., for B.G. Edwards & Shaw, consulting engineers, 105, Colmore-row, Birmingham. Dep. £2 2s.

Stockton-on-Tees.—Garage.—Steel-frame work and roof in connection with structure in Bridge-rd. for garage purposes, for T.C. J. P. Wakeford, B.E.

Swansea.—Lodges.—For caretaker's lodge at (a) Council Elementary school at Cadle, and (b) the Council Elementary school at Cwmrhydyceirw, for E.C. Borough Architect, 3, Prospect-place. Dep. £2 2s.

Tiverton.—Building.—Pumphouse and construction of pumpwell at Westexe, for T.C. A. M. Kinnison, B.S. Dep. 10s. 6d.

JUNE 30.

Islington.—Repairing and Painting.—Iron railings at the Public Gardens, also sewer ventilation shafts, for the Metro. Boro. Council of Islington. E.F., Mun.-bldgs., Upper-st.

✱**March.**—Extensions.—To the Wisbech Grammar school, for the C.C. R. S. W. Perkins, C.S., County Hall, March. Dep. £2 2s.

✱**Oxfordshire.**—Secondary School.—Erection of, at Banbury, Oxon, for the Oxfordshire E.C. W. A. Daft, A.R.I.B.A., 9, New-rd., Oxford. Dep. £2 2s.

Tredegar.—Additions.—Also alterations to Central Institute, which includes extension to present billiards room, with new caretaker's dwelling over, etc., for Workmen's Institute Society. W. Edgar Jones, architect, Rivoli, Park-row.

Wokingham.—Houses.—46, for R.D.C. C. Aldridge, A.R.S.A., Loddon Bridge, Earley, near Reading.

JULY 2.

London.—Painting.—Certain lighthouses around coasts of England and Wales, for Trinity House. Secretary, Trinity House, Tower-hill, E.C.3.

London.—Tenements.—80 tenements in one block at South-st., off King-st., Hammersmith, for Hammersmith B.C. Streatfeild & Attwell, 13, New-sq., Lincoln's Inn, London, W.C.2. Dep. £2.

Various Places.—Cleaning and Repainting.—Of various bridges, etc., for the L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W.1 Dep. £1.

JULY 3.

Chester.—Houses.—5 houses and shops and 3 non-parlour type cottages on Handbridge estate, for T.C. C. Greenwood, City E. and S. Dep. £2 2s.

✱**Gateshead.**—Telephone Exchange.—Erection of, at Felling, Gateshead, for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

✱**Palmers Green, N.**—Extension.—To Telephone Exchange, Palmers Green, N., for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

JULY 4.

✱**Herne Bay (Kent).**—Telephone Exchange.—Erection of, at Herne Bay, for the Commissioners H.M.O.W., Contracts Branch, King Charles-st, S.W.1. Dep. £1 1s.

✱**Leeds.**—Adaptations, etc.—At Walkers-buildings, Park-place, Leeds, for the Commissioners H.M.O.W., Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

JULY 5.

✱**London.**—Additional Storey.—At the G.P.O. (West) E.C., for the Commissioners H.M.O.W., Contracts Branch, King Charles-st., London, S.W.1. Dep. £1 1s.

JULY 7.

Chelmsford.—New County Offices.—Erection of the first section to front King Edward's-av. and Threadneedle-st., Chelmsford, for the Essex C.C. Jno. Stuart, F.R.I.B.A., C.A., Springfield Old Court. Dep. £3 3s. to F. H. Owers, City Accountant, Duke-st., Chelmsford.

JULY 11.

Pontypool.—Bungalows.—6 workmen's bungalow dwellings at Broadway, for U.D.C. S.

JULY 12.

Bingley.—Extensions.—At Grammar schools, for West Riding E.C. Education Department, County Hall, Wakefield.

NO DATE.

Ardsley.—Renovations.—To Council schools at Ardsley—Blackgates, Stanley-lane End, Newton-hill, Stourton, and Carlton. Percy Beaumont, W.R. Education Offices, 8, St. John's North, Wakefield.

Plymouth.—House.—Boarding-house at Rock, near Wadebridge. H. J. Hammick, L.R.I.B.A., architect, 63, Old Town-st., Plymouth.

✱**Preston.**—Repairs to Stonework.—To crockets pinnacles and stonework generally, etc., on the Town Hall, for the Preston B.C. W. Platt, B.E and S., Town Hall, Preston.

✱**Selected Collieries.**—Pithead Baths.—Under the Mining Industries Act, 1926, for the Miners' Welfare Committee. The Sec., Miners' Welfare Committee. Mines Dept., Dean Stanley-st., S.W.1.

Wisbech.—Conversion.—Of existing dwelling at Walpole Highway into two cottages, for B. W. Morton. T. F. Parker, architect, 8, Old Market.

MATERIALS, ETC.

JUNE 18.

Dagenham.—Granite.—For U.D.C. H. E. Lightfoot, E. and S.

Farnworth.—Fencing.—275 lin. yds. of unclimbable iron fencing, 5 ft. high, for U.D.C. Frank Ashton, E. and S.

Grimsby.—Tar, etc.—For E.C. J. W. Sharp, secretary, Education Offices.

JUNE 19.

Bootle.—Flags.—6,000 sq. yds. of concrete flags, for C.B. B.E.

Manchester.—Bricks.—For T.C. H. Dunks, Acting Town Clerk.

JUNE 21.

Kingston-upon-Hill. — Builders' Materials. — For Corporation. H. Bell, City Electrical Engineer and Manager, Electricity Works, Sculcoates, Hull.

JUNE 26.

Foleshill.—Granite, etc.—For R.D.C. Mr. J. B. Wikeley, E. and S.

JUNE 30.

Huyton-with-Roby.—Concrete Kerbs.—For U.D.C. H. Finister, S.

ENGINEERING, IRON AND STEEL.

JUNE 18.

Reigate. — Improvements.—Reinforced concrete road bridge, and construction of approaches in connection therewith, at Shipley Bridge, Burstow, for R.D.C. W. J. Hatton, District Surveyor, 48, High-st. Dep. £3 3s.

JUNE 19.

London.—Bridge.—For (1) girder bridge spans, (2) five footbridges, complete with stairways and roof coverings, for Madras and Southern Mahratta Railway Co., Ltd. Secretary, 25, Buckingham Palace-rd., S.W.1.

JUNE 20.

Somerford.—Widening.—Of Somerford county bridge in mass concrete and masonry, together with roadwork on approaches, and other works, for Staffordshire C.C. R. S. Murt, C.S.

JUNE 21.

Coulsdon and Purley.—Reinforced Concrete Bridge.—Construction of and necessary road works at Foxley Hill-rd., Purley, for the U.D.C. Gilbert A. Ballard, O.B.E., A.M.I.C.E., 69, Brighton-rd., Purley, Surrey. Dep. £5 5s.

JUNE 22.

Dublin.—Steelwork.—112 tons of steelwork, for Gt. Southern Railway. J. F. Sides, chief engineer, Broadstone Station, Dublin.

JUNE 23.

Docking.—Tower.—Reinforced concrete water tower, about 1¼ mile of 4 in. and 3 in. water mains, with street fountains, hydrants, etc., for R.D.C. J. A. Stoughton, clerk. Dep. £1 1s.

JUNE 25.

Brigg.—Sewerage.—Construction of a 9-in. cast-iron sewage pipe line from pumping station at Gasworks to Sewage Disposal Works, for U.D.C. J. R. Oxenham, S. Dep. 10s. 6d.

Edinburgh.—Bridges.—Two ferro-concrete bridges over Water of Leith at Murrayfield-rd. and Baird-drive, for T.C. Burgh Engineer, 329, High-st.

Irlam.—Reconstruction.—For (a) 160 yds. 3 ft. diameter concrete tube outfall sewer, and (b) detritus tanks, for U.D.C. E. and S. Dep. £3 3s.

JUNE 26.

Hunslet.—Water Supply.—At Oulton-with-Woodlesford, for R.D.C. C. H. Marriott, Son & Shaw, engineers, Church-st. chambers, Dewsbury. Dep. £1 1s

Pontefract.—Tower.—Reinforced concrete water tower, for T.C. W. H. Newton, B.E. Dep. £3 3s.

JUNE 27.

Hackney.—Condensing Water Works.—Construction of intake and discharge chambers on the banks of the Lee Navigation, together with concrete intake and discharge pipe-lines, for the B.C. Boro. Electrical Engineer, 18-24, Lower Clapton-rd., E.5. Dep. £2 2s.

Winchelsea.—Bridge.—Reinforced concrete bridge over River Brede at Winchelsea, for M.T. Chief Engineer, Roads Department, Ministry of Transport, 7, Whitehall-gardens, S.W.1. Dep. £5.

JUNE 30.

Barnsley.—Culvert.—Under L. and N.E.R. at Silkstone, for C.B. J. R. Fox, Waterworks Engineer. Dep. £3 3s.

Tamworth.—Sewerage.—Laying of 9-in. and 6-in. diameter stoneware and cast-iron pipe sewers, and construction of sewage pumping station, manholes, and other incidental works at Wilnecote, for R.D.C. H. L. Kent, engineer, 29, Lichfield-st. Dep. £3 3s.

JULY 7.

Ford. — Reconstruction. — Of Gorsey-lane canal bridge, for Lancashire C.C. W. H. Schofield, County Offices, Preston.

JULY 26.

London.—Steelwork.—For India Store Department. Director-General, Belvedere-rd., S.E.1.

AUGUST 14.

Cairo.—Bridge.—Construction of metallic bridge over Nile at Benha. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Reference A.X. 6243.)

OCTOBER 1.

Copenhagen.—Bridge.—Highway and railway bridge across Lillebelt, for Danish State Railways. Chief of Department of Way and Works, Copenhagen or Danish Legation, London.

NO DATE.

London.—Steelwork.—For (a) 8 deck span girder bridges (150 ft. span), and (b) 10 plate girder bridges (40 ft. span), for Bengal-Nagpur Rly. Co., Ltd. R. C. Volkers, secretary, 132, Gresham House, Old Broad-st., E.C.2.

ROAD, SEWERAGE, AND WATER WORKS.

JUNE 18.

Connah's Quay.—Making-up.—Of Primrose-hill, Primrose-st., Princes-st. and Spring-st., for U.D.C. Williams & Clarke, civil engineers, 6, Godstall-chambers, Chester.

Erith.—Road.—Reinforced concrete carriageway in Pier-rd., for U.D.C. H. Hind, E. and S. Dep. £1.

✱**Greenwich.**—Pipe Sewer.—Construction of approx. 830 lin. ft. of 18in. pipe sewer and 380 lin. ft. of 12-in., on Charlton Park site, for the B.C. B.E.'s Dept., Town Hall, Greenwich. Dep. £2 2s.

Ripon.—Conversion.—Into water-closets of 50 pail-closets and 14 privies, for T.C. Sanitary Inspector.

Warminster. — Drain.—Surface-water drain at Boreham-rd. and providing necessary pipes and other materials, for U.D.C. F. J. Reilly, E. and S.

JUNE 19.

Holywell.—Pipes.—Laying and jointing in Parish of Llanasa of about 5½ miles of 3-in., 4-in. and 6-in. cast-iron pipes, together with valves and hydrants, and construction of a small covered collecting reservoir, for R.D.C. Dodd & Watson, engineers, County chambers, Corporation-st., Birmingham. Dep. £2.

Holywell.—Water Supply.—For (Contract No. 2), the R.D.C. Dodd & Watson, engineers, County-chambers, Corporation-st., Birmingham. Dep. £2.

Holywell.—Water Supply.—In Parish of Llanasa (Contract No. 3), for R.D.C. Dodd & Watson, engineers, County-chambers, Corporation-st., Birmingham. Dep. £2.

Mountain Ash.—Macadam.—Re-surfacing with tarred blast furnace slag macadam, 2 in. thick, in 2-coat work, and on existing tarred slag bottoms, about 2,700 super yds. of Oxford-st., for U.D.C. W. G. Thomas, E. and S.

Sheppey.—Pipes.—Laying of about 160 lin. yds. of stoneware pipes, 12 in. diameter, and construction of three manholes, in ditch between warden waypost and Water-lane, construction of two gullies

at roadside, and the filling-in of the ditch over pipes, for R.D.C. C. A. Till, S., "Bellevue," Seaside-av., Minster, near Sheerness.

South Kensington. — Re-drainage and Other Works.—To the forecourt of the Imperial Institute, for the Commissioners H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 1s.

Wealdstone.—Sewers.—Construction of certain roads and sewers on Elmgrove-rd. housing site, for U.D.C. H. Walker, S. Dep. £1 1s.

JUNE 20.

Cheadle and Gatley.—Drainage.—For (a) certain works of sewerage, surface-water draining and roadworks; (b) construction of paths, gates and fences in connection with 60 houses upon two sites, for U.D.C. S.

Hendon. — Making-up.—Of Whitchurch-gardens, Little Stanmore; The Drive, Edgware, and Woodhall-av., for R.D.C. H. W. Rackham, S. Dep. £1 1s. each.

JUNE 22.

Blackburn.—Asphalte.—Supplying and laying mastic asphalte in Lord-st., for C.B. H. M. Webb, Borough and Water Engineer.

Southampton.—Fencing.—460 yds. of dwarf iron fencing, for C.B. B.E. Dep. 10s. 6d.

JUNE 23.

Buckingham.—Water Supply.—Making and testing yield of exploratory excavations in Akeley, for Corporation. J. S. Alford, 11, Victoria-st., S.W.1.

Hersforth.—Making-up.—Of (1) Lee-lane; (2) Springfield-mount; (3) Springfield-cres.; (4) Back Low-lane; (5) Back Breary-av., for U.D.C. Jas. E. Aldersley, S. Dep. £1 1s.

JUNE 25.

Beckenham.—Reconstruction.—Of Rectory-rd.—For U.D.C. H. Storr Best, S. Dep. £2.

Beddington and Wallington.—Sewerage.—700 ft. of 9 in. diameter stoneware pipe sewer, together with works appurtenant thereto, in waterlogged ground in bridle path, Beddington, for U.D.C. S. F. R. Carter, E. and S. Dep. £1 1s.

Bromley.—Improvements.—To Edward-rd. and Garden-rd., for T.C. B.E. Dep. £1.

Church.—Cemetery.—Deep drainage work at cemetery, Dill Hall-lane, Church, for the Church and Clayton-le-Moors Joint Cemetery Board. H. Ross, A.R.I.B.A., 15, Cannon-st., Accrington.

Newbury.—Roads.—Re-surfacing and other works in following roads:—(a) St. John's-rd. (Class II.); (b) Essex-st.; (c) Rockingham-rd.; (d) Wharf-rd.; (e) Greenham Mill-lane, for T.C. B.E. and S.

JUNE 26.

Barking Town.—Resurfacing.—Of Ripple-rd., between Westbury-rd. and the level-crossing, with approximately 3,600 sq. yds. of creosoted deal block paving on concrete foundation, for U.D.C. R. A. Lay, E. and S.

Billericay.—Sewers.—Sewers, manholes and incidental work in private streets of second portion of Sunnymede estate, Great Burstead, for R.D.C. S. Dep. £2 2s.

Leeds.—Asphalting.—Asphalting garden paths on Ivy House and East End park and Harehills-lane housing estates, for T.C. W. T. Lancashire, City Engineer.

Leeds.—Road.—Covering of roadway with tar macadam at institution at Beckett-st., for B.G. J. H. Ford, Clerk to Guardians, 11, South-parade.

JUNE 27.

Merton and Morden.—Making-up.—Poplar-rd., from Erridge-rd. to The Circle, for U.D.C. G. Jerram, E. and S. Dep. £1.

Tiverton.—Reconstruction.—Of Gold-st. and Fore-st., for T.C. A. M. Kinnison, B.S.

JUNE 28.

Barnet.—Sewerage.—Construction of sewers, manholes and sewage disposal works and various other works incidental thereto, at Shenley, for R.D.C. Bruges & Swayne, 1, Victoria-st., S.W.1. Dep. £5 5s.

JUNE 29.

Stanley.—Pipes.—Laying and jointing 4,845 lin. yds. of cast-iron pipes, together with special valves, hydrants, air valves, etc., for U.D.C. C. Clemesha Smith, engineer. Dep. £2 2s.

JUNE 30.

Barnsley.—Improvements.—Back road off Chilton-st. and back road between School-st. and Cutty-lane, for C.B. B.E.

JULY 2.

Argyll.—Road.—Construction of first section of new Tyndrum-Ballachulish-rd., from Carnoch, through Glencoe, to vicinity of Kingshouse, for C.C. M. Sinclair, County Clerk, Lochgilphead. Dep. £3 3s.

Harrow-on-the-Hill.—Improvements.—In College-rd., for U.D.C. J. P. Bennetts, E. and S. Dep. £3.

JULY 11.

Chelmsford.—Making up.—Of (1) Finchley-av., (2) Old Court-rd., for T.C. E. J. Miles, B.E. and S. Dep. £1 1s.

NO DATE.

Carrick-on-Shannon. — Tar-spraying. — Surface dressing with Spramex various roads. The County Surveyor, Carrick-on-Shannon.

Auction Sales, Tenders, etc.

JUNE 18.

Middlesbrough.—One "Fowler" Traction Engine. Sealed tenders endorsed "Traction Engine," S. E. Burgess, B. E. and S., Municipal-bldgs., Middlesbrough.

JUNE 22.

Ilford.—John D. Wood & Co., and Kemsley, will sell as a whole or in three lots, at the London Auction Mart., 155, Queen Victoria-st., E.C.4., building estate, Mossford Green Farm and 27 cottages, Barkingside, Ilford, about 65 acres. Auctioneers, K., Broad-st. House, Old Broad-st., E.C.; J. D. W. and Co., 6, Mount-St., W.1.

JUNE 26.

Dorking.—Hampton & Sons, at 20, St. James's-sq., S.W.1, freehold, residential and building estate, "Sondes-place," over 29 acres. Vacant possession. Auctioneers, as above.

***Essex.**—Joseph Hibbard & Sons. Without reserve. By order of R. S. Juby, Esq., at the premises in Sunnyside-rd., Green-lane, High-rd., Ilford. Stock of timber, sawmill machinery and building material. June 26. At a low reserve. By order of the owner. Ilford, Essex (unless previously sold by private treaty), freehold timber yard and builders' premises situate in Sunnyside-rd., High-rd., area about 11,000 sq. ft., with buildings, vacant possession. Auctioneers, 15, Newington Green, Islington, N.1.

London.—Hampton & Sons, at the St. James' Estate Rooms, 20, St. James's-sq., two freehold building estates, remaining portions of the Wey Manor estate, West Weybridge, Surrey.

West Weybridge (Surrey).—Hampton & Sons, at 20, St. James's-sq., S.W.1, remaining portions of Wey Manor Estate, comprising 2 freehold building estates of about 33 and 138 acres respectively. Auctioneers, as above.

JUNE 27.

Bucks.—Golbie & Green will sell in lots at the Town Hall, Chesham, building and accomodation lands about 26 acres. Chesham Bois estate. Auctioneers, 9, Bruton-st., W.1.

London.—John D. Wood & Co. & Kemsleys (acting in conjunction) at the London Auction Mart, 115, Queen Victoria-st., E.C.4, building estate, Mossford Green Farm, Barkingside, Essex, together with 27 cottages, farm house and premises. Auctioneers, K., Broad-st. House, E.C.2. J. D. W. & Co., 6, Mount-st., W.1.

JUNE 27 and 28.

***Broughton Monchelsea.**—Winch & Sons, at Broughton Monchelsea, re James Wood, deceased, machinery builders' stock-in-trade, seasoned timber, etc. Auctioneers, Cranbrook.

JUNE 28.

***Walsall.**—Perry & Phillips, Ltd., in conjunction with Belcher & Son, will sell, on the premises, Bescot Hall, Walsall, fixtures and fittings, fabric of mansion, etc. Auctioneers, B. & S., Darlaston, P. & P., Ltd., Bridgnorth.

JULY 3.

Near Ickenham.—Hampton & Sons, at 20, St. James's-sq., S.W.1, 4,000 feet freehold frontage land. Auctioneers, as above.

JULY 3 and 4.

***Essex.**—Joseph Hibbard & Sons. By order of Messrs. Calders, Ltd., without reserve, at the Mill, on the Bishops Stortford to Dunmow-rd., Takeley, stock of well-seasoned converted English timber, machinery, etc. Auctioneers, 15, Newington Green, Islington, N.16.

JULY 17.

***Harrow Weald.**—Hampton & Sons (in conjunction with Alexander King & Gould) will sell at the St. James' Estate Rooms, 20, St. James'-sq., S.W.1, freehold building estate, "The Kiln," about 24 acres, with vacant possession. Auctioneers, 20, St. James'-sq., S.W.1.

Public Appointments.

JUNE 20.

London.—Assistant Surveyors required on the permanent pensionable establishment of the Works and Buildings Directorate, Air Ministry. Secretary, Air Ministry, Adastral House, Kingsway, W.C.2.

JUNE 22.

London.—Lecturer in Building Construction, Building Materials and Builders' Quantities required at the Polytechnic, Regent-st., W.1. Director of Education, as above.

JUNE 23.

Insein.—Building Inspector at the Government Technical Institute required by the Government of Burma. The Secretary to the High Commissioner for India, General Dept., 42, Grosvenor-gardens, S.W.1.

JUNE 25.

***Birmingham.**—Architectural Draughtsman required by the City of Birmingham E.C. Chief Edn. Officer, Margaret-st., Birmingham.

***Liverpool.**—Studio Instructorship required at the University of Liverpool School of Architecture. Registrar.

JUNE 30.

***Southall.**—Building Trades Inspector required at the Southall Technical School by the Middlesex E.C. The Secretary, 40, Eccleston-sq., Westminster, S.W.1.

JULY 2.

***Brighton.**—Assistant Lecturer in the Department of Building and Constructional Engineering at the Brighton Technical College. F. Herbert Toyne, secretary, 54, Old Steine, Brighton.

JULY 12.

London.—Assistant Examiners in the Patent Office. Forthcoming examinaiton. The Secretar., Civil Service Commission, Burlington-gardens, W.1.

NO DATE.

***Gold Coast.**—Foreman Painter required by the Government of the Gold Coast for the Public Works Dept. for a tour of 12 to 18 months' service. Apply at once, Crown Agents for the Colonies, 4, Millbank, S.W.1, quoting M/760.

***Wandsworth.**—Teachers for various subjects required at the Wandsworth Technical Institute, High-st., S.W.18. The Principal.

PROPOSED NEW BUILDINGS AND OTHER WORKS*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board. Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; County Architect, C.A.; Surveyor, S.; Engineer, E.; Borough Architect, B.A.; Architect, A.

Alford.—Scheme is under consideration by Rev. W. Whitehead and parishioners of Parish Church for carrying out improvements at £1,250.—Lindsey C.C. are proposing to erect school for senior scholars at £8,000.

Ashton-under-Lyne.—Officers and committee of the Ashton P.S.A. Brotherhood (Hon. Sec., Mr. J. B. Leigh), 36, Jackson-st., Ashton-under-Lyne, are proposing to make alterations to meeting-house. Albion Old Chapel and to reseat the hall, estimated to cost £1,200.

Aylesbury.—Large printing works in Tring-rd., owned by Hazell, Watson and Viney, Ltd., 52, Long Acre, W.C., is to be extended. Architect is E. Hazell, F.R.I.B.A., 5, Tavistock-square, W.C.1.

Bedford.—A factory is to be built at Bedford to deal with surplus milk.—B.G. are to spend £3,000 on extending their casual wards.

Birmingham.—T.C. recommend, subject to M.H. approval, that £85,837 in connection with purchase of properties for widening arterial roads.—Public Works and Town Planning Committee recommend erection of public convenience in Stratford-rd., at £1,250.—Conveniences are also to be provided at Rednal Tram Terminus, at £1,500.—A sum of £81,600 been sanctioned by Public Works Committee for sewering portion of Perry Barr area.—Scheme for reconstructing foul water sewer from The Avenue to Warwick Brook, at £18,800, be approved.—Schemes for providing sewerage to Warren Farm estate, Perry Barr, been recommended, at £149,000.—Extensions to Griffins Brook Valley sewer and culvert also been recommended, at £54,000.—The "Argyle" public house at junction of John Bright-st. and Suffolk-st. and 5 and 6, Suffolk-st. are to be purchased at £32,000 for street improvements.—For reconstructing certain roads Council sanctioned £50,720.—Town Planning Committee been authorised to proceed with paving and repaving various footpaths in the City, at £75,000.—Subject to M.H. approval, Council recommend constructing a 42 ft. road, including a bridge over canal, between Wood-lane and Tyburn-lane and reconstruction to 60 ft. of bridge over canal in Holly-lane, Erdington.—Education Committee recommend, subject to B. of E. and M.H., proposals for erection of second block of new Council school at Yardley Wood, at £14,900.—B. of E. and M.H. are to be asked to approve third department of new Council school, Bierton-rd., at £18,400.—Junior school at Fir Tree-rd., Birches Green, is to be built, subject to M.H. and B. of E. sanction. Cost is £18,050.—Subject to approval of B. of E. and M.H. improvements to heating and ventilation at Waverley-rd. Secondary school is to be carried out, at £2,850.

Blackpool.—Mr. William Hayes, 15, Cliff-place, Bispham, acquired site at Squire's-gate, where he proposes to erect shops.

Bolton.—T.C. passed plans:—Bolton Moor Kinema, Ltd., extension to Picture House, Regent Cinema, Deane-rd.; J. Russell, 2 houses, Ashbourne-av.; Anglo-American Oil Co., engine and pump house, Bridgeman-st.; Bolton Wanderers Football Club, new stand, Burnden-park; T. P. Smith, amended plan of 4 houses and shops, Rishton-lane; H. Crossley, house, Dean-rd., Smithills; J. S. Hughes, 12 houses, Chilham-st.; M. Welsh, 3 houses, Hurst-st.; A. Barrett, 2 houses, off Green-lane and Lowther-st.; S. Main, amended plan of 4 houses, Chorley Old-rd.; S. Main, 4 houses, off Chorley Old-rd.; J. R. Bell, 11 lock-up garages, Back Crescent-rd.

Bournemouth.—Bournemouth and Christchurch B.G. accept tender for £12,486 16s. 2d. in connection with extension of new women's infirmary, and sanction an application for loan of £13,570.

Bradford.—T.C. passed plans for bungalows:—P. P. Leach & Sons, Ltd., St. Leonard's-grove, 8; H. E. Peachey, Moor Top-rd., Low Moor, 2; J. Priestley, Hutton-rd., 12; A. Cansfield & Sons, Whitehead-place, 4; R. R. North & Co., Victoria-rd., Eccleshill, 4; A. & J. Chippindale, Thorn-grove, 4; E. Balmforth & Sons, Ascot-av., 4; Shepherd Bros. & Brown, Haycliffe-drive, 4; P. Brown, St. Leonard's-rd., 2; J. A. Groves, Briarwood-drive and Bradlaugh-rd., 2; J. Bentley, Cleckheaton-rd., 4; J. Priestley, Hawes-crescent, 2; J. A. Groves, Brierwood-crescent, 8; J. Bentley, Fairfield-rd., 5; W. North & Son, Leamington-drive, 4; S. Priestley, Hawes-rd., 3; H. Farnish, Bolingbroke-st. and Hastings-av., 22.

* See also our List of Contracts, Competitions, etc.

Bridlington.—T.C. passed plans:—C. Wray, 8 houses, Hamilton-rd., for J. E. Wray & Son; J. R. Earnshaw, new club premises, Marlborough-terr., for County Club, Ltd.; J. R. Earnshaw, 2 houses, Hamilton-rd., for Mrs. Taylor and Mrs. Oddy; 2 pairs of houses, Trinity-av., for W. Ingleby; Morris Motor, Ltd., garage, Fort Hall, for Miss Vickers; C. L. Waite, 33 lock-up garages, St. Ridan and St. Alban-rds., for J. R. Taylor.

Burnley.—T.C. passed plans for 6 houses, Burnley-rd., for G. Foster.

Chesterfield.—Grassmoor Co. offered to Central Miners' Welfare Committee freehold site for pit-head baths at £12,000 and £15,000.

Colne.—T.C. received letter from M.H. approving proposal for erection of 32 houses on Laneshaw Bridge site (scheme No. 6). Sanction to borrowing of £12,800 in respect of houses also given.

Coventry.—T.C. passed plans:—Extension of Little Heath Works, Chapel-lane, for Courtaulds, Ltd.; 2 houses, Wainbody-av., for Johnson & Newton; 6 houses, Parkgate-rd., and 2 houses, Nunts-lane, for W. H. Broad; factory, off Beresford-av., for Riley (Coventry), Ltd.; addition to St. Mary's Church, corner of Raglan-st. and Hood-st., for Rev. J. J. Walsh; petrol pump and tank installation, corner of Windsor-st. and Trafalgar-st., for Glover Bros.; 18 houses, Beaumont-crescent, for E. J. Sutton; 4 houses, Parkgate-rd., for A. Randle; 20 houses, Paxton-rd., and 7 houses, Beaumont-crescent, for F. Shaw; 2 houses, The Avenue, Lime Tree Park estate, for Bates & Son, Ltd.; 6 houses, Park-av., Lime Tree Park estate, for W. H. Mariott; 6 houses, Woodside-av., for C. A. Anelay & Son; saw mill, etc., Holyhead-rd., for Carbodies, Ltd.; 9 houses, Kenpas-rd., for Neale & Parker; 30 houses, Parkgate-rd., for Kelly & Son; 11 houses, Browett-rd., for J. Goldstein; 4 houses, South-av., Lime Tree Park estate, for Fellows & Son; 2 houses, Holbrook-lane, for P. S. Burden & Co., Ltd.; 8 houses, Butt-lane, Allesley, for Gazey Bros.

Coxhoe.—Hayes and Gray, architects, of West Hartlepool, prepared plans for cinema to accommodate 650 persons, for Iseton Bros.

Derby.—T.C. passed schemes for the improvement of two areas scheduled as unhealthy—one bounded by River-st., Duke-st., Bridge Gate and Darley-lane; and other by Nune-st., Green-st., Bridge-st. and Brook-st.—by demolishing houses and providing fresh accommodation for 171 dispossessed tenants. —Efforts are being made to secure a site for Church of St. Alban's.

Dewsbury.—General offices are proposed for Dewsbury and West Riding Permanent Building Society, in Church-st. Plans by Kirk, Sons & Ridgeway, Market-place.

Earlstown (Lancs).—Extensions are to be made to premises of Sankey Sugar Co., of Earlstown, to plans prepared by Edward Wood & Co., Ltd., Trafford-park, Manchester.

Eastbourne.—A £10,000 branch library is to be built.—Development scheme, by which accommodation for concerts and amusements will be provided at £38,500, been approved by T.C.

East Ham.—B.C. instructed B.E. to submit scheme for lavatory accommodation for males at Central and Brampton-parks. Plans passed:—Addition to factory, Trebor works, Shaftesbury-rd., J. C. Mellis & Co.; 2 houses, 14/16, Arthur-rd., J. Stokes & Sons; 13 lock-up garages on vacant land between 164/194, Lonsdale-av., J. W. Lohden; steel-framed garage on vacant land corner Katherine-rd. and Sherrard-rd., H. Blackman.

Finchley.—Inquiry has been held into application for extension of Parish Church. Alterations, if carried out, will provide seating accommodation for 750 people, at £7,000.

Fleggs.—D.C. agreed to 10 more houses at Caister.

Friern Barnet.—M.H. held an inquiry into application of U.D.C. for approval of preliminary scheme for town-planning Friern Barnet.

Gateshead.—Sanction been secured by T.C. from M.H. to erect flats in Morrison-st. and Johnson-st. at £13,351.

Guildford.—Site in High-st. been bought by Surrey Public House Trust Co., Ltd., Bank House, for hotel. Plans by H. Redfern, F.R.I.B.A., Queen Anne's-chambers, To thill-street, S.W.1.

Hallgate.—W. Broardbent, architect, Leeds, prepared plans for club premises at Hallgate.

Hatfield.—Postmaster-General has given notice that he requires a new post office and telephone exchange at Hatfield, Hertfordshire.

Hendon.—U.D.C. passed plans:—Block of 4 shops and flats, east side of Edgware-rd., West Hendon, C. W. Francis; 11 houses, Road "C," Hendon, F. Howkins; 2 pairs semi-detached houses and 4 garages, north side Hendale-av., Hendon, J. Bradshaw; 11 lock-up garages and office rear of Broadway, West Hendon, Mr. W. Carpenter; 2 detached houses and 2 garages east side Wykeham-rd., Hendon, W. T. Streather; new street from Farm-av. to the Watford Bye-Pass-rd., Ecclesiastical Commissioners.

Hove.—T.C. passed plans:—Hunter & Bedford, for T. J. Braybon & Son, 40 houses, Lullington-av.; Hunter & Bedford, for J. Cohen, 12 houses, Bolsover-rd.; Hunter & Bedford, for W. J. Keene, pair semi-detached houses, Berriedale-av.; C. J. Kerridge & Son, 6 garages, Goldstone-lane, Old Shoreham-rd.

Hull.—The £100,000 scheme for extension and enlargement of the Iceland Fish Market at Hull has been brought to notice of trawler owners, and was received with considerable satisfaction.

Kingsteignton.—P.C. decided to apply to Newton Abbott R.D.C. for 32 more houses.

Kingston-on-Thames.—County Justices approved application of E. O. Sewell, for Charrington's Brewery, for sanction plans submitted for structural alterations to Albion, Bridge-rd., East Molesey.

Lancaster.—T.C. decided to purchase for £2,610 13 acres for site for isolation hospital to replace Laneside Hospital.

Littleborough.—Catholic congregation of St. Mary's, Featherstall-rd., are to consider scheme for building church in lieu of existing iron structure.

Liverpool.—Rev. Sargent is forming new parish on Norris Green estate. Church dedicated to St. Teresa is to be erected in Ulting-av.

London (Fulham).—Fulham Hospital is to have a roof garden.—B.C. are to spend £325 on renovations at Town Hall.

London (Lewisham).—Lewisham is to have a new Salvation Army hall to seat 500, at £5,980.—Old houses in Lewisham are to be turned into one-roomed flats for women workers by the United Women's Homes Association.

Lurgan.—U.D.C. decided to erect 16 kitchen houses at £280 each, and 33 parlour type at £330 each.

Manchester.—Style & Mantle, Ltd., 42, Oldham-st., have acquired premises in Oldham-st.—T. Mellor, 165 and 167, Broughton-lane, Lower Broughton, acquired site in Orriel-st. at rear of present premises, where he proposes to erect garage. Plans by A. Evans, architect, 155, Weaste-lane, Pendleton.

Margate.—T.C. passed plans:—4 houses, Tivoli Park-av., Wiles Bros.; internal structural alterations, St. George's Hotel, P. Levett; 4 shops and garages, Northdown-rd., corner of Cornwall-gardens, E. Monson.

Measham.—Ashby-de-la-Zouch R.D.C. recommend 10 non-parlour houses.

Morden.—A £12,000 church is to be built.

Nelson.—Plans have been submitted by Rev. Baron for improvements St. Joseph's Catholic School by providing accommodation for 210 mixed scholars and 150 infant scholars.

Newcastle.—City Council received permission to borrow £408,000 for erection of dwellings.—Proposals for development of West End of Newcastle as a town planning area been submitted to M.H. to inquire into.

Newport (Mon.).—J. P. Hodge, architect, of Prudential-buildings, prepared plans for cinema on site at Maindu-park estate.

Northampton.—B.E. has submitted to Highways Committee plans and estimates for Kingsthorpe Main drainage scheme, which provides for the drainage of an area of about 830 acres. Scheme provides for main sewers and surface-water sewers of sufficient size to drain the whole area, and the approximate cost will be £43,000.—Alterations are to be made to "Plumbers Arms," Sheep-st., for P. Phipps & Co. Architect, H. G. Gaylor, North-rd.

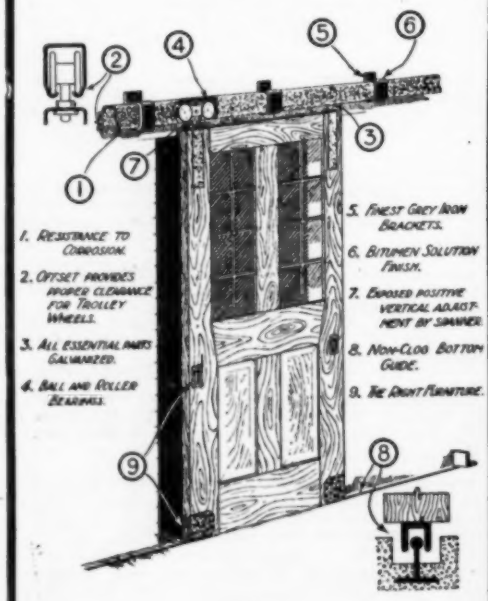
Nottingham.—Tenders are to be invited for premises for Nottingham Permanent Building Society in Friar-st. Plans by Starr & Hall, architects, Victoria-st.

SLIDING DOOR GEAR

FOR FACTORIES, GARAGES, SCHOOLS, ETC.

Nine essential features of "Henderson" Door Gear

TRADE MARK


1. RESISTANCE TO CORROSION.
2. OFFSET PROVIDES PROPER CLEARANCE FOR TROLLEY WHEELS.
3. ALL ESSENTIAL PARTS GALVANIZED.
4. BALL AND ROLLER BEARINGS.
5. FINEST GREY IRON BRACKETS.
6. BITUMEN SOLUTION FINISH.
7. EXPOSED POSITIVE VERTICAL ADJUSTMENT BY SPANNER.
8. NON-CLOG BOTTOM GUIDE.
9. THE RIGHT FURNITURE.

WRITE FOR BOUND CATALOGUE B26 TO

P. C. HENDERSON, LIMITED.

BARKING, ESSEX. PHONE: GRANGEWOOD 0247

Otley.—Otley Entertainment Co., Ltd., are to erect cinema at Beech-hill to plans by O. Holmes, architect and surveyor, 41, Boroughgate, Otley.

Paignton.—U.D.C. passed plans:—2 pairs of houses, Maidenway-rd., for W. Mead; 3 cottages, Church-st., for A. H. Eggins; pair houses, Roundham-av., for Willicott & Barnes; amended plan of business premises and flat corner Elmbank-rd. and St. Michael's-rd., for Paignton Co-operative Society, Ltd.; 7 lock-up garages, rear Grosvenor Hotel, Manor-rd., for Mr. Davey.

Penge.—Penge licensing justices sanctioned permission to alter and enlarge the "Goldsmiths' Arms," Croydon-rd.

Preston.—T.C. propose to make provision for workshops at Chestnuts Sanatorium.

Radcliffe.—W. Johnson & Sons, architects, 27, Old-rd., Miles Platting, Manchester, prepared plans for extensions to mill premises in York-st., for British Cotton and Wool Dyers' Association, 22, Cumberland-st., Manchester.

Reading.—B.S. submitted a report on weights and measures office, and residence for inspector of weights and measures at Burlton House, Castle-st. Two offices are provided instead of one. Estimated cost of new offices is £1,780, and estimated cost of adapting Burlton House as a residence for inspector £220.

Retford.—Quantities have not yet been issued for rebuilding "Half Moon" inn, which adjoins Town Hall Yard. Architect, W. Southall, L.R.I.B.A., Chapel Gate, Retford.

Rhyl.—E.C. propose to erect school to accommodate 400 children on Vale-rd. site.

Scarborough.—Trustees of First Church of Christ Scientist have acquired property known as Powley House in Falsgrave-rd. at somewhere about £7,000. It is intended to extend building and erect new hall. Plans by J. Cooper, Weponess, Valley-rd.

Scunthorpe.—U.D.C. decided to purchase plot of land west and north-west of Crosby Housing estate, on which to build fifty more houses.

Sheffield.—Licensing Committee confirmed removal of licence from "Horse and Jockey" Inn at Dronfield to premises to be erected at Grenhill Norton. Tennant Bros., of Exchange Brewery, Sheffield, are promoters. Gibbs, Flockton & Gibbs, of St. James-row, Sheffield, are the architects.

Shepperton.—Church authorities are endeavouring to raise funds for school at £3,380.

Southgate.—A site in Southgate having frontage to Powys-lane, been acquired by Ideal Housing Co. Plans for erection of high-class, detached residences are in course of preparation.

South Shields.—Shops and business premises are to be erected on site in Ridgeway-rd. and Sunderland-rd., for Mr. Finn. Plans by W. Newby, architect, of King-st.

Stalybridge.—New grocery stores to be built for Stalybridge Industrial Co-operative Society, Ltd., in Grosvenor-st. Plans prepared at architects' department of society at 1, Balloon-st., Manchester.

Stow.—B.G. are to consider the general question of accommodation and conditions of institution.

Sunbury.—Plans passed by U.D.C.: J. Bennett, 8 houses, Green-lane; General Accident Assurance Co., pavilion, Sunbury Manor Sports Ground.

Tilbury.—Council received M.H. approval for acceptance of tenders for erection of further 315 houses.

Tolworth.—Barclays Bank, Ltd., Gracechurch-st., E.C.3, decided to build branch bank at corner of Ditton-rd. and Kingsdowne-rd. Architect is A. J. Hardwick, Eagle-chambers, Eden-street, Kingston-on-Thames.

Wakefield.—J. Smith's Tadcaster Brewery Co., Ltd., are to proceed with scheme of alterations and additions to "Leopard" inn, Kirkgate.

Walsall.—T.C. propose to erect additional 500 houses.

Watford.—On behalf of Messrs. Benskin, M. Healy applied for approval of Justices at Watford Petty Sessions of plans for alteration and reconstruction of premises of Compasses Inn, at corner of Market-place and Market-st. Application was approved.

A Firm's Centenary.

On Saturday, June 2, the directors of Messrs. Clark, Hunt and Co., Ltd., of Shoreditch, with their staff and friends,—numbering in all 212—celebrated the centenary of the firm by a trip to Hastings, where they lunched at the Waverley Hotel. Mr. H. J. Hunt gave some most interesting reminiscences of the business and those connected with it from its earliest days, also mentioning the fact that the centenary corresponded with the 50th anniversary of his connection with the firm. Mr. A. C. Hunt said that since 1914 the number of hands had increased from 140 to over 200, the weekly wage bill was three times as large as it was then, and the sale 2¾ times as large. The cartage facilities had been increased from two motors and three horse vans to eight motors and three cars. In the works department the number of hands had increased from 53 with 8 fires to 98 with 14 fires. The speeches were followed by a presentation to Mr. H. J. Hunt, by the directors and staff, of a silver-plated tray and Doulton ware coffee service. Mr. A. C. Hunt was also presented with a case of gold-mounted pipes and cigar-holder.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 5 6
Second Hard Stocks	3 19 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 12 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 14 3	Do. Bullnose	9 15 0
Do., Bullnose	3 6 3	Blue Wire Cuts	7 5 0

Best Stourbridge Fire Brick :—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory, and Salt Glazed Stretchers	21 0 0	D'ble Str'tch'rs	29 10 0
Headers	20 10 0	D'ble Headers	26 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	One Side and two Ends	30 10 0
		Two Sides and one End	31 10 0
		Splays, and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super.	1 11	3 in per yd. super	2 9
2½ in. ,, ,,	2 4	4 in. ,, ,,	3 6

	s. d.	
Thames Ballast	10 6 per yd.	delivered 2 miles radius Paddington.
Pit Sand	13 9 ,, ,,	
Thames Sand	14 6 ,, ,,	
Best Washed Sand	14 6 ,, ,,	
½ in. Shingle for Ferro-Concrete	12 9 ,, ,,	
¾ in.	14 0 ,, ,,	
¾ in. Broken Brick	11 6 ,, ,,	
Pan Breeze	8 0 ,, ,,	

Per ton delivered in London area in full van loads.
Best Portland Cement. British.
Standard Specification. Test £2 13 0 to £2 15 0 40s. alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement (Waterproof)	4 3 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
,, ,, Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
,, ,, White	3 12 6
,, Fine	5 12 0
Strapite, Coarse	3 17 0
,, Finish	3 9 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.
Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 2 10

BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station, per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. per ft. cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE.—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube 4 4½
Do. do. delivered on road wagons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.—

	s. d.
Delivered at any Goods Station, London.	
Random blocks from 10 ft. and over P. ft. cb.	17 0
Sawn two sides ,,	27 0
Sawn three or four sides ,,	32 0

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London.

6 in. sawn two sides landings to sizes (under 30 ft. super) Per ft. super	5 6
6 in. rubbed two sides, ditto ,,	6 0
3 in. sawn two sides slabs (random sizes) ,,	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ,,	1 6½
1½ in. to 2 in. ditto, ditto ,,	1 3½

HARD YORK—
Delivered at any Goods Station, London.

Scappled random blocks Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) Per ft. super	5 1½
6 in. rubbed two sides, ditto ,,	6 1½
4 in. sawn two sides slabs (random sizes) ,,	2 1½
3 in. ditto ditto ,,	2 10
2 in. self-faced random flags Per yd. super	8 8

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£30 0	3 × 6	£21 0
4 × 9	26 0	3 × 11	25 0
4 × 8	25 0	2 × 11	26 0
4 × 7	23 0	3 × 9	24 0
3 × 8	22 0	2½ × 9	24 0
3 × 7	22 0	3 × 4½	21 0
2½ × 7	21 0	3 × 4	21 0

PLANED BOARDS.

1 × 11	£30 0	1 × 9	£28 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅝	18/-	1½	30/-
¾	21/-	1¾	34/-
1	24/-		

TONGUED AND GROOVED FLOORING

Inches.	per sq.	Inches.	per sq.
1	24/-	⅝	16/6
1½	30/-	¾	19/-
1¾	34/-	1	24/-

Ins. BATTENS.	s. d.	SAWN LATHS.	s. d.
¾ × 2 ..... per 100 ft.	2 6	Per bundle	2 6

1" AND UP THICK.

	£ s. d.	£ s. d.
Dry Austrian Walnscot, per ft. cube	0 16 0	to 0 18 0
Dry American and/or Japanese Figured Oak, ft. cube	0 14 0	to 0 15 0
Dry American and/or Japanese Plain Oak, ft. cube	0 10 0	to 0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 15 0	to 0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 16 0	to 1 1 0
Dry Cuba Mahogany, ft. cube	1 1 0	to 1 10 0
Dry Teak, ft. cube	0 13 0	to 0 15 0
Dry American Whitewood, ft. cube	0 10 0	to 0 14 0
Best Scotch Glue, per cwt.	4 10 0	to —
Liquid Glue, per cwt.	4 7 0	to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000.

	£ s. d.		£ s. d.
24 by 12	32 18 4	18 by 10	18 12 11
22 by 12	29 17 11	18 by 9	16 9 2
22 by 11	27 14 2	16 by 10	15 12 6
20 by 12	26 5 0	16 by 8	12 3 9
20 by 10	22 10 0		

TILES.

Delivered at London rate stations in full truckloads of not less than 6 tons. Per 1,000. f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	5 7 6
ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) { Hand-made	0 9 6
{ Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted	12 10 0
Plain Compound Girders	14 10 0
Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.—To London Station, per ton

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
⅜ in.	11 0 0	⅞ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Tubes. Wrought Mild Steel.	Tubes. Genuine Staffs. Iron.	Fittings. ½ in. and under.	Fittings. Over ½ in.	Flanges. ½ in. and under.	Flanges. Over ½ in.
	%	%	%	%	%	%
Gas	67½	50	42½	45	52½	55
Water	63½	46½	37½	40	47½	50
Steam	60	42½	32½	35	42½	45
Galv. gas	55	37½	32½	35	42½	45
Galv. water	50	32½	27½	30	37½	40
Galv. steam	45	27½	22½	25	32½	35

C.I.—HALF-ROUND GUTTERS—London Prices ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/3½	11½d.	3½d.
3½ in.	1/4½	1/1½	3½d.
4 in.	1/6	1/3	3½d.
4½ in.	1/7½	1/4½	4½d.
5 in.	1/10½	1/6½	5½d.
O.G. GUTTERS.			
3 in.	1/8	1/4½	3½d.
3½ in.	1/8	1/4½	3½d.
4 in.	1/9½	1/4½	3½d.
4½ in.	1/11½	1/7½	4½d.
5 in.	2/4½	1/10½	5½d.

RAIN-WATER PIPES, &c.

Per yd. in 6 ft.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/10½	1/3	1/9½
2½ in. ,,	2/0½	1/4½	2/1½
3 in. ,,	2/6	1/9	2/7½
3½ in. ,,	2/11½	2/0½	3/0½
4 in. ,,	3/5	2/6½	3/8½

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles. s. d.
2 in. per yd. in 6 fts. plain	3 3	2 4½	2 10
2½ in. ,,	3 9	2 7½	3 7
3 in. ,,	4 6	2 10	4 2½
3½ in. ,,	4 11½	3 7	4 11½
4 in. ,,	5 5½	4 0½	5 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works

	Pipe. s. d.	Bends, stock angles. s. d.	Branches. stock angles. s. d.
3 in. per yd. in 9ft. lengths	4 4	5 1	8 0½
4 in. ,, ,,	4 10	5 8	10 0
5 in. ,, ,,	6 6	10 10	17 1
6 in. ,, ,,	8 6	13 2	21 9

Gasken for jointing, 38/6 per cwt.

	Per ton in London. £ s. d.		£ s. d.
IRON— Common bars	13 0 0	to	14 10 0
Staffordshire Crown Bars— Good merchant quality	14 5 0	to	15 15 0
Staffordshire Marked Bars	16 5 0	...	17 5 0
Mild Steel Bars	10 0 0	...	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	...	11 0 0
Hoop iron, basis price	12 0 0	...	13 0 0
,, Galvanised	27 0 0	...	28 0 0
Soft Steel Sheets, Black— Ordinary sizes, to 20 g.	13 5 0	...	14 5 0
,, ,, ,, 24 g.	14 5 0	...	15 5 0
,, ,, ,, 26 g.	16 5 0	...	17 5 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	...	16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 10 0	...	17 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	18 10 0	...	20 10 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 9 ft. to 20 g.	18 0 0	...	19 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	18 10 0	...	19 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	21 10 0	...	22 10 0
Sheets Galvanised Flat, Best quality— Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	22 0 0	...	23 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 0 0	...	26 0 0
Best Soft Steel Sheets, 26 g.	25 10 0	...	26 10 0
Cut Nails, 3 in. to 6 in.	19 0 0		

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	29 0 0
Pipe in coils	29 10 0
Soil pipe	32 10 0
Compo pipe	33 10 0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 5s. cwt. extra.

Oil lead, ex London area, at Mills per ton	19 5 0

COPPER.

	s. d.
Seamless Copper tubes (basis) per lb.	1 1
Strong sheet ,,	1 0
Thin ,,	1 1
Copper nails ,,	2 3
Copper wire ,,	2 4

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- ,,

TIN.—English Ingots, 3/1 per lb. SOLDER.—Plumber's 1/3, Tinmen's 1/6, Blowpipe 1/7 per lb.

PAINTS, &c.

			s. d.
Raw Linseed Oil, in pipes	per gallon		0 2 11
,, ,, ,, in barrels	,,		0 3 1
,, ,, ,, in drums	,,		0 3 3
Boiled ,, ,, in barrels	,,		0 3 3
,, ,, in drums	,,		0 3 6
Turpentine in barrels	,,		0 3 11½
,, in drums (10 galls)	,,		0 4 1½
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)			51 0 0

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

PAINTS, &c. (*contd.*)

		£	s.	d.
GENUINE WHITE LEAD PAINT— "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J," Brand, and other best brands (in 14 lb. tins) not less than 5 cwt. lots	per ton delivered	69	10	0
Red Lead, Dry (packages extra)..	per ton	39	10	0
Best Linseed Oil Putty	per cwt.	0	15	0
Filicol	,,	0	15	6
Size. XD quality	fkn.	0	3	6

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ..	2½d.	32 oz. fourths	6½d.
15 ,, thirds ..	3½d.	32 ,, thirds	8½d.
21 ,, fourths ..	3½d.	Obscured Sheet, 15 oz.	3½d.
21 ,, thirds ..	4½d.	,, ,, 21 ,,	4½d.
26 ,, fourths	4½d.	Fluted 15oz.6½d.,21oz.	9d.
26 ,, thirds ..	6½d.	En'lled 15 oz.4½d.,21oz.6½d.	

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per ft.
⅛ Rolled plate	4½d.
3/16 Rough rolled	5½d.
¼ Rough rolled	5½d.
Figured Rolled, Baltic, Oceanic, Arctic Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8½d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon £	s.	d.
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Copal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	6
Fine Copal Flatting	ditto	1	0	6
Hard Drying Oak	ditto	0	18	0
Fine Hard Drying Oak	ditto	0	19	0
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	2	0
Best ditto	ditto	1	12	0
Best Japan Gold Size		0	12	6
Best Black Japan		0	10	6
Oak and Mahogany Stain (water)		0	12	0
Brunswick Black		0	7	6
Berlin Black		0	14	6
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebine		0	9	0
Cuirass Black Enamel		0	7	0

ELECTRIC REFRIGERATION

To inaugurate the British electrical refrigeration campaign a luncheon was held by the Electrical Development Association at the Hotel Cecil on Thursday, June 7. Sir John Gatti, J.P., M.A. (President, Electrical Development Association), who occupied the chair, in the course of a short speech, said the prohibition of preservatives in food led to the difficulty of keeping food fresh. Preserved food might be unwholesome, but bad food must be worse. For some years refrigeration had enabled this country to draw on the reserves of the world for its food supplies. This refrigeration on a large scale, however, did not really help the immediate problem, which was to ensure the purity of food not only in the hands of the wholesaler, or even the retailers, but when it had passed beyond them to the actual consumer. A great many up-to-date retailers had, of course, already established refrigeration as part of their business, but a great deal more could be done by the retail industry on these lines. It was, however, when they came to the actual consumer that they claimed they could do that which no other agency could perform. Electrical refrigerators disposed of the common objections to preserving food in a humid atmosphere—it was easy of installation, simple in working, and, as he could testify from personal experience, extraordinarily efficient in its action. Electricity suppliers would, he was sure, see that the cost of current for refrigerators was such that the running cost of an efficient electrical refrigerator would probably not exceed that of an ordinary ice-box.

THE SCOTTISH BUILDER

NEW BUILDINGS IN SCOTLAND

Edinburgh.—BUNGALOWS.—The Edinburgh Dean of Guild Court has granted the following building warrants :—Edinburgh Corporation—extension of paint shop at Shrubhill Car Depôt; Mr. C. H. Dunlop—five double bungalows, at House o' Hill-road, Blackhall; Mr. John Rowan—three shops and two houses at Lochend-road South; and Messrs. Thomas L. Rae & Co.—eight bungalows at Kirkhill-gardens.

Glasgow. — BUILDING. — Plans have been lodged in the Glasgow Dean of Guild Court for the erection of a building in Bothwell-street by the Scottish Legal Life Assurance Society. The building will occupy the entire site between West Campbell-street and Blythswood-street. The cost of construction is estimated at £300,000. The architects are Messrs. Wylie, Wright & Wylie, Glasgow.

Glasgow.—CULVERT.—The Statute Labour Committee of the Corporation recommend approval of a proposal to construct a culvert of arch type to carry the Glasgow-Edinburgh road over the glen of the North Calder Water, and that the offer by Messrs. Shanks & M'Ewen, who are the contractors for the road construction at this point, to carry out the work for £48,505 be accepted.

Glasgow.—SLUM CLEARANCE.—The Scottish Board of Health have given their consent to the borrowing of £160,290 for the slum clearance schemes of the Corporation during 1928-29.

Inverness.—DESTRUCTOR.—The Town Council has decided to erect at the electricity works a refuse destructor at a cost of £12,500.

Moray.—ROADS.—The Moray C.C. has accepted the annual report and estimate prepared by Mr. Alfred Jefferies, road surveyor, for road work in the county during the ensuing year. The report provides for the expenditure of £47,000.

Paisley.—BUILDINGS.—The following linings have been granted by the Dean of Guild Court :—Middle U.F. Church, Paisley, a suite of halls at School Wynd and Meetinghouse-lane; and Mr. William Morris, wine and spirit merchant, 9, Old Sneddon-street, a public-house and shop.

Kelvingrove Art Galleries.

The Art Galleries Committee of Glasgow Corporation have at present under consideration a proposal for the decoration of the panels in the statuary hall of the Kelvingrove Art Galleries. Designs have been submitted by Mr. Frank Brangwyn, R.A., A report as to the cost and the suitability of the scheme is being considered.

Whitton Park, Twickenham : Proposed Open Space.

Efforts are being made to secure as an open space a portion of Whitton Park, Twickenham, which is being developed for building purposes. The building company has offered to sell the land. It contains a lake of two acres, the site of a ruined tower, walled gardens, and some of the finest old trees in Middlesex. The General Purposes Committee of the Middlesex County Council consider that it would be undesirable that such magnificent trees should be sacrificed, and recommend that the Twickenham Borough Council and the Heston and Isleworth Urban District Council be informed that the county council will be recommended to make a contribution towards the cost of acquisition, subject to a satisfactory price being arranged.

Merchandise Marks Inquiries : Pumps.

The Standing Committee (General Merchandise) appointed by the Board of Trade will hold their inquiry as to whether pumps of all descriptions and parts thereof should bear an indication of origin, at 11.30 a.m. on Monday, July 9, and at 10.30 a.m. on Tuesday, July 10. The inquiry will be held at the Board of Trade Offices, Great George-street, London, S.W.1. Communications should be addressed to the Secretary, Mr. E. W. Reardon, at that address.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rate of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers—Masons'‡ Bricklayers'‡ Plasterers'†
Aberdeen	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Airdrie	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Alexandria	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Arbroath	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/5½	1/1
Ayr	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Bathgate	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Coatbridge	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumbarton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Dumfries	1/6½	1/6½	1/6½	1/7½	1/6½	1/6½	1/6½	1/2
Dundee	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3 †1/2½
Dunfermline	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	‡1/2½ †1/2½
Edinburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/2½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/6½	1/7	1/6½	1/7	1/6½	1/6½	1/7	1/2
Glasgow	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Greenock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Hamilton	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7	1/2½
Inverness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/2
Kilmarnock	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Kirkcaldy	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Leith	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/3½ †1/2½
Motherwell	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Perth	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½
Stirling	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Stirlingshire (Eastern District)	1/7½	1/9	1/7½	1/8½	1/7½	1/7½	1/8	1/2½
Wishaw	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/8	‡1/2½ †1/2½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 1042.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	,, ,,	1	0
Add for every additional depth of 6 ft.	,, ,,	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	,, ,,	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	38	0
Add if in underpinning in short lengths	,, ,,	7	0
Add if in floors 6 in. thick	,, ,,	3	3
Add if in beams	,, ,,	3	9
Add if aggregate 1 : 2 : 4	,, ,,	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	,, ,,	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	32	0	0
Add if in stocks	,,	7	10	0
Add if in Staffordshire blues	,,	22	0	0
Add if in Portland cement and sand	,,	1	10	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1¼

POINTING.

Neat flat struck or weathered joint	,, ,,	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	,, ,,	0	0	10
Axed in stocks	,, ,,	0	1	9
Rubbed and gauged jointed in putty camber or segmental	,, ,,	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	,, ,,	0	1	6
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	,,	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	,, ,,	9	6
Three-quarter-inch on flats in two thicknesses	,, ,,	6	3
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	,, ,,	1	2

MASON.

York stone templates fixed	per foot cube	13	0
York stone sills fixed	,, ,,	22	0
Bath stone and all labour fixed	,, ,,	10	6
Beer stone and all labour fixed	,, ,,	15	0
Portland stone fixed	,, ,,	20	0

SLATER.

Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	,,	80	9
Do. 24 in. × 12 in. Do. Do.	,,	90	0

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	5	0
Do. joists	,, ,,	5	6
Do. roofs, floors and partitions	,, ,,	6	0
Do. trusses	,, ,,	8	6

		¾″	1″	1¼″	2″
Deal rough close boarding	per sq.	35/6	40/–	45/–	72/–

Flat centering for concrete floor, including struts or hangers	,,	50	0
Do. to beams	per ft. sup.	0	11
Centre for arches	,,	1	6
Gutter boards and bearers	,,	1	0

FLOORING.

		¾″	1″	1¼″	1½″
Deal-edges shot	per sq.	—	44/6	53/–	60/6
Do. tongued and grooved	,,	—	49/–	57/6	65/–
Do. matchings	,,	45/–	51/–	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/–	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	,, ,,	2	1
Add for fitting and fixing	,, ,,	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	,, ,,	3	9

DOORS.

		1½″	1¾″	2″
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	,,	2/5	2/8	2/11
Two-panel moulded both sides	,,	2/8	2/11	3/2
Four-panel Do. Do.	,,	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1″	1¼″	1½″
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	,,	1/4	1/6	1/9
Add if cross-tongued	,,	2d.	2d.	2d.

STAIRCASES.

	1″	1¼″	1½″	2″	2½″
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/–	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail: average, 3 in. × 3 in.	,, ,,	6	0
Add if ramped	,, ,,	12	0
Add if wreathed	,, ,,	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/–
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/–
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	,,	19	0
Do. stanchions	,,	21	9
In roofwork	,,	27	6

RAIN-WATER GOODS.

		3″	4″	5″	6″
Half-round plain rebated joints	ft. run	1/6	1/9	2/–	2/6
Ogee Do. Do.	,,	1/9	2/–	2/6	3/3
Rain-water pipes with ears	,,	1/9	2/7	—	—
Extra for shoes and bends	each	4/4	5/11	—	—
Do. stopped ends	,,	1/11	2/4½	3/7	4/–
Do. nozzles for inlets	,,	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	42	0
Do. Do. in flats	,,	41	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	,, ,,	1	3
Copper nailing	,, ,,	0	3

		½″	¾″	1″	1½″	2″	4″
Drawn lead waste	per ft. run	1/2	1/9	2/–	3/4	4/–	—
Do. service	,,	1/8	2/2	2/7	3/10	—	—
Do. soil	,,	—	—	—	—	—	6/9
Bends in lead pipe	each	—	—	—	—	3/3	8/2
Soldered stop ends	,,	1/2	1/8	2/1	2/10	3/6	—
Read lead joints	,,	11d.	1/–	1/3	1/11	2/4	4/10
Wiped soldered joints	,,	2/10	3/6	4/–	4/11	6/6	9/9
Lead traps and cleaning screws	,,	—	—	—	14/7	19/6	—
Bib cocks and joints	,,	6/4	9/7	15/4	41/–	—	—
Stop cocks and joints	,,	15/4	17/2	25/8	64/–	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	6
Do. Do. Sirapite	,, ,,	2	9
Do. Do. Keen's	,, ,,	4	0
Add saw lathing	,, ,,	1	7
Add metal lathing	,, ,,	2	6
(Not including hangers or runners, etc., for suspended ceilings.)			
Portland cement screed	,, ,,	2	2
Do. plain face	,, ,,	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	6

GLAZIER.

		s.	d.
21-oz. sheet plain	per foot sup.	0	8½
26-oz. Do.	,, ,,	1	0
Obscured sheet	,, ,,	1	1
⅛-in. rolled plate	,, ,,	0	9
¼-in. rough rolled or cast plate	,, ,,	0	10½
¼-in. wired cast plate	,, ,,	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	,, ,,	0	7
Plain painting, 1 coat	,, ,,	0	9
Do. 2 coats	,, ,,	1	2
Do. 3 coats	,, ,,	1	9
Do. 4 coats	,, ,,	2	4
Graining	,, ,,	2	3
Varnishing twice	,, ,,	1	9
Sizing	,, ,,	0	3
Flatting	,, ,,	0	7
Enamel	,, ,,	1	1
Wax polishing	per foot sup.	0	6
French polishing	,, ,,	1	2
Preparing for and hanging paper	per piece, 2/– to 4/–		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

PLUMBING TRADES' NATIONAL APPRENTICESHIP COUNCIL

A meeting of this Council was held at 31, Gower Street, London, on Wednesday, June 6. Those present were Mr. E. Lesser (in the chair), Messrs. W. Thacker, W. Morris, Hugh Davies, W. S. Butterworth, F. Hoey, T. McKenna, J. Pickford, W. Smeaton, R. H. Bew and the hon. secretary (Dr. R. S. Clay).

Mr. Thacker reported that, arising out of the minutes of the previous meeting, the Institute and National Federation of Plumbers had decided to place on record their disapproval of the practice of apprenticing lads to corporations.

In accordance with notice given at the previous meeting, Mr. Smeaton moved, and it was unanimously resolved, that Mr. Ernest Lesser be formally co-opted as a member of the Council under the new Clause 2 (d), and be asked to continue to occupy the position of chairman. Mr. Lesser expressed his sincere thanks to the meeting for their appreciation of his services and his willingness to continue to act as chairman. He reported that he had had a satisfactory interview since the last meeting with two officials of the Ministry of Labour, from which he gathered that the Ministry were desirous of maintaining their representation on the Council. It was accordingly resolved that the Ministry of Labour be invited to appoint another official to fill the vacancy on the Council.

Reports were considered regarding the progress of the Apprenticeship Scheme, from the following areas:—Manchester, North-East Lancs, North-East Coast, Birmingham and Leicester. From the Manchester Area, Mr. Lucas reported that the Local Councils in Manchester, Oldham, Ashton, Bury, Leigh, Stockport and Wimslow were meeting regularly, and already makng their influence felt in these districts. From the North-East Coast, Mr. Stevenson reported (*inter alia*) that 180 apprentices in the employ of 63 firms were now indentured under the National Scheme. The Chairman reported that, as the result of correspondence with Mr. Freear and Mr. Skillington, he had been invited to address a meeting at Leicester regarding the scheme on June 14, and had accepted the invitation. As regards the Birmingham Scheme, it was unanimously resolved that this be now formally approved by the Council, thus ratifying the provisional approval already given.

Mr. Blackman submitted a proposal designed to regularise the position arising on the unindentured apprenticeship of a lad to his father. After discussion, it was resolved to recommend Areal and Local Councils to make regulations providing for the registration in such cases of:—

(*a*) Father and son's names.
(*b*) Age of son.
(*c*) Date of commencement of training.
(*d*) Period.
(*e*) An undertaking by parent that the lad's training will conform to that laid down by the Areal or Local Council and to comply with local working rules.

A discussion took place regarding statistics recently published by the Ministry of Labour as to the number of lads now apprenticed to the plumbing trade, and doubts were expressed as to the accuracy of the figures given. The meeting was of the opinion that the Council should endeavour in course of time to compile a reliable register of apprentices for the whole country, and Mr. Thacker stated that such records were already being kept in North-East Lancashire.

The Council considered certain drafts prepared by the chairman at the request of the Council to provide for the contingency of an apprentice being transferred from one employer to another. Mr. Lesser stated, however, that he did not think it would be expedient to add to the indenture any clause contemplating the possibility of a transfer in cases where, through no fault of his own, an employer was not able to give his apprentice a complete training in all branches of the trade. The meeting agreed with this view, and it was finally resolved merely to approve the chairman's suggested form of endorsement (as follows) for use in cases where a transfer took place with the full and free consent of all parties:—

"This agreement made the.....day of ..... 19..... between the within-named ..... of ..... and ..... of..... witnesseth that the said ..... with the consent of the within named ..... and ..... doth hereby assign and transfer unto the said ..... all the unexpired residue of the within-named term of ..... years, and all right and title to the service of the said ..... during such residue of the said term, subject always to the covenants and agreements of the within-written indenture.

In witness, etc."

Where the transfer was of a purely temporary character, the meeting agreed that the execution of any legal document was not necessary or advisable.

The Hon. Secretary reported that donations of 10 guineas each had been received from the Worshipful Company of Plumbers and the Operative Plumbers' Association, and five guineas each from the Institute and Federation of Plumbers. The meeting recorded its thanks for these welcome contributions. The next meeting of the Council was fixed for 10.30 a.m. on July 24.

TRADE NEWS

Exhibition of Concrete Mixers.

During the next few weeks, builders, contractors and estate foremen will have excellent opportunities to inspect "Marshall-Benson" concrete mixers, as we are informed by Messrs. Marshall, Sons and Co., Ltd., that these machines will be on view at the following shows:—Lincolnshire Show, Scunthorpe, June 27-29; Norfolk Show, Norwich, June 27-28; Peterborough Show, Peterborough, July 3-5 (Cole Bros. stand); Royal Show, Nottingham, July 10-14; Yorkshire Show, Halifax, July 18-20; Highland Show, Aberdeen, July 24-27; and Royal Welsh Show, Wrexham, August 8-10.

Travelling Radiator Exhibit.

The motor travelling caravan, fitted with a working "Ideal Cookanheat" installation, and put on the road by the National Radiator Co., Ltd., of Hull, will demonstrate as follows:—June 18: R. E. Jones', Ltd., Car Park, top Dillwyn-street, Swansea; June 19: The Green, Bridgend; and June 21 and 22: C.W.S. Ground, opposite County Club, Westgate-street, Cardiff.

Stucco at Grosvenor House.

We learn that the stucco renderings employed round the court at Grosvenor House—illustrated in our last issue—were in the Adamite Company's "Atlas White." Messrs. Edcaster's, who carried out the contract, used in conjunction with the cement a white Leighton Buzzard silica sand of coarse grain, and the result is very pleasing and, we understand, thoroughly satisfactory.

Wall Radiators.

Messrs. Lumbys, Ltd., of Halifax, have issued cards dealing with their new 16 in. and 24 in. "Solar Doric" wall radiators. These radiators are to be fixed to the wall as the name implies. They have plain smooth surfaces which are easy to clean and have a neat and dignified appearance, and are assembled by means of 1¼ in. right and left hand screwed nipples. Each section measures 12 in. long and 2½ in. wide. The 16 in. radiator has a heating power of 4½ sq. ft. per section, and the 24 in. radiator has a heating power of 6½ sq. ft. per section.

Mantelpieces at Grosvenor House.

The London Mantel Co. have supplied, we learn, over 160 mantels to the new Grosvenor House, Park-lane, W.1., which we illustrated in our last issue.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him next week not later than Tuesday evening.

* **Denotes *accepted*.**
† **Denotes *provisionally accepted*.**
‡ **Denotes *recommended for acceptance*.**
§ **Denotes *accepted subject to modifications*.**

Ambergate.—Laying of about 15,000 yards of 47-inch steel pipes lined with hydro-carbon, fixing of valves, and construction of valve chambers, etc., in connection therewith, for the Derwent Valley Water Board. Mr. S. B. Winser, engineer, Bamford, near Sheffield:—
*G. Shellabear & Son, Ltd., Maldon.

Atherstone.—70 houses on the Westwood housing site, for the R.D.C. Mr. H. J. Coleby, architect, Council Offices, 102, Long-street:—
*Eadie Towers & Co., Wolverhampton £22,610

Barry Island.—Buildings for the Esplanade Property Co., at Friars-road. Mr. Swash, F.R.I.B.A., architect, Newport:—
*H. S. Rendell & Sons, Barry Dock.
Steelwork—*A. D. Dawnay, Cardiff.
Stonework—*Concrete Construction Co., Ltd., Gloucester.
Floors—*Siegwart Floor Co., Ltd., Strand, W.C.

Belfast.—Heating of Mersey-street public elementary school by accelerated low pressure hot water system, for the C.B. Education Architect, Victoria-street:—
*Musgrave & Co., Ltd., Belfast £1,260

Birmingham.—For (*a*) 28 non-parlour type houses, on the Billesley Farm estate, and (*b*) 27 parlour type houses, on the Wheelwright estate, for the Corporation. Mr. H. H. Humphries, City Engineer and Surveyor:—
(*a*) *G. Smith (Birmingham), Ltd., Birmingham.
(*b*) *W. J. Simms, Sons & Cooke, Ltd., Nottingham.

Bolton.—Church parlour, for Wesleyan Church, Chorley Old-road. Messrs. Potts, Hennings & Topping, A. & F.R.I.B.A., architects, Bradshawgate:—
*S. J. Hodgkiss, Ltd., Farnworth.

Bolton.—Premises at Deansgate, for Messrs. Lloyds Bank, Ltd., of Bolton:—
*J. & N. Dickinson (1922), Ltd., Bolton.

Bootle.—23 houses in Linacre-lane and Fernhill-road, for the Corporation:—
*Lloyds & Cross, Liverpool.

Bridgwater.—100 additional houses on the Victoria-road housing estate, for the T.C.:—
*James Pugsley & Son, Bristol £30,000
(Subject to the approval of M.H.)

Burton-on-Trent.—Erection of new Co-operative Society premises at the junction of Borough-road and Derby-road:—
*Thos. Lowe & Sons, Ltd., Burton-on-Trent.

Bury.—Slating of rear walls and gables at the Bolton-road housing scheme, for the C.B. The Borough Surveyor:—
*H. Boot & Sons, Ltd., Sheffield.

Bury.—Installation of a heating system at the Fire Station buildings for the C.B. Borough Surveyor:—
*J. Brown, Tottington, near Bury.

Carlisle.—Footbridge over the London, Midland and Scottish Railway, near Maryport Cottages, for the T.C.:—
*Markham & Co., Ltd., Chesterfield.

Carlisle.—Wiring for and installation of electric light for 54 houses on the Rigg-street, Duke-street and Newtown-Raffles housing estate, for the T.C.:—
*W. Batey & Sons, Carlisle.

Cookstown.—New technical school in Cookstown, for the Regional Committee:—
*T. M'Keown & Sons, Cookstown £6,882
I. Copeland & Sons, Belfast 6,600

Dewsbury.—Alterations necessary at the baths premises in order to provide for mixed bathing, for the C.B.:—
*N. Raynor £187 13

Derby.—Alterations and extensions to the Poor Law Offices, for the B.G. Messrs. Naylor, Sale & Woore, FF.R.I.B.A., architects, Market-place:—
*J. H. Fryer, Derby £3,960

Doncaster.—200 houses and roads and sewers on the Intake site, for the Corporation:—
*H. M. Nowell, Ltd., Doncaster £96,450

Dolgelly.—Additions and improvements in connection with chapel, for Baptist Church Committee. Mr. J. E. Griffiths, L.R.I.B.A., architect (Owen Morris Roberts & Son), Portmadoc:—
*Evan Roberts, Portmadoc £1,900

Ealing.—Additions and alterations to the administrative block and wards at Maternity Hospital, South Ealing, for the Chiswick and Ealing Hospitals Committee. Mr. E. Willis, Chief Engineer, Town Hall, Chiswick:—

F. Coyle & Co., Brentford	£8,672 10 3
T. Millman, Ltd., Ealing	8,610 0 0
T. H. Kingerlee & Sons, Oxford	8,282 0 0
J. Dorey & Co., Ltd., Brentford	8,242 0 0
W. J. Dickins, Ealing	8,200 0 0
F. G. Cressy, Ltd., Chiswick	8,000 0 0
A. Roberts & Co., Ltd., Kensington	7,839 0 0
*G. Bollom & Sons, Ltd., Acton ...	7,797 0 0

Fakenham.—For (1) new gymnasium at the Secondary school, and (2) minor alterations and additions at the Council school, Little Snoring, for the Norfolk E.C. Mr. C. W. Bullen, architect:—

(1) *Horace Mack, East Dereham ... £1,780
(2) *F. R. Wellby, Elmham 538

Farnworth.—56 houses at Bradford-road, for the U.D.C. Mr. F. Ashton, engineer and surveyor:—

*E. & S. Street, Ltd., Kearsley (18)
*J. H. Coope, Ltd., Farnworth (24).
*C. W. Norris, Farnworth (14).

Glasgow.—Cinema, at Knightswood-avenue. Mr. W. Inglis, architect, Bath-street:—

*McDougall & Co.
Steelwork—*Bladen & Co.
Wright—*J. Garrey.
Plaster—*White & Co.
Plumber—*McCulloch & Giffen.
Tiling—*Price & Co.

(All of Glasgow.)

Golborne.—14 non-parlour type houses on the Heywoods housing site, for the U.D.C. Mr. J. Ford, surveyor:—

W. Peak, Warrington	£6,650	0
Byron Bros., Hindley	6,412	0
W. J. Bickerstaffe & Son, Wigan	6,370	0
J. Watson, Ashton-in-Makerfield	6,268	3
Kearsley & Gee, Ashton-in-Makerfield	6,237	0
D. Cooper, Warrington	6,090	0
Payne & Co., Warrington	5,944	0
Osborne & Co., Warrington	5,866	0
*Clough & Gaskell, Wigan	5,425	0

Heanor.—36 parlour and non-parlour type houses, in blocks of fours and pairs, and 28 parlour and non-parlour type houses in blocks of fours and pairs, on Old Burnt House-road, for the U.D.C. Mr. R. Archer, Housing Architect:—

*S. Johnson, Hucknall (36).
*Wm. Wood, Heanor (28).

Henley.—Renovation of the ceiling of the Council Chamber, for the T.C.:—

*Cordery & Pither.

Hindley.—Sunday School at St. Paul's Congregational Church. Mr. Herbert Wade, architect, 2, Birley-street, Blackpool:—

*D. A. Ablett & Sons, Wigan.

Ilkeston.—School in Cavendish-road. Mr. H. T. Sudbury, architect, Lord Haddon-road:—

*D. Roberts & Son, Ilkeston.

King's Dyke.—New church at King's Dyke, near Peterborough, for the United Methodist Trustees. Messrs. W. Fovargue & Sons, architects, The Causeway, March:—

H. & L. Cave, Thorney	£1,596	0	0
T. Measures, Peterboro'	1,515	0	0
Rose & Sons, Whittlesey	1,489	7	4
O. P. Drever & Son, Ltd., Kettering	1,454	0	0
A. Pettitt & Sons, Ramsey	1,420	0	0
J. W. Barber, Stanground	1,407	0	0
J. Gutteridge & Sons, Peterboro'	1,345	0	0
A. R. Hazell, Peterboro'	1,320	12	6
*J. & W. Duddington, Whittlesey	1,317	4	6

Kingsbridge.—6 houses at Walke's Pool, Kingston, for the R.D.C. Mr. Thomas Harris, surveyor, Fore-street, Kingsbridge:—

W. Morgan, Thurlestone	£2,949	0
J. Rogers, Aveton Gifford	2,944	15
H. Williams, Holbeton	2,800	0
*G. & W. Edgeworth, Aveton Gifford	2,639	10

(Subject to approval of M.H.)

Lancaster. — Mission hall in Lewsham-road, Bowerham. Mr. R. J. Skilling, architect and surveyor, 88, King's-street:—

Excavator, Bricklayer, Mason, Carpenter and Joiner—
*H. J. Slawson, Ingleton £473 3 4
Slater and Plasterer— " " "
*Thompson & Bailey, Lancaster ... 170 10 0

Leeds.—Lock-up shops fronting Harrogate-road, Moortown, for Mr. H. Brown. Messrs. Kitson, Parish & Ledgard, architects, Lloyds Bank-chambers, Vicar-lane:—

*Paul Rhodes, Ltd.

Littleborough.—Sunday school in connection with the Greenhill Primitive Methodist Church. Mr. W. Shepherd, architect:—

*Dryland & Preston, Ltd., Littleborough.

Liverpool.—Alterations and additions to the Granton-road Council school, for the Corporation. Mr. A. D. Jenkins, Land Steward and Surveyor. Quantities by Mr. A. A. Bowes, 14, Cook-street:—

*S. Powell & Son (Liverpool), Ltd., Liverpool.

Liverpool.—Additions and alterations to Butler-street Council school, for the T.C. Mr. A. D. Jenkins, Land Steward and Surveyor. Quantities by Mr. E. Ivor Cule, Rigby's-buildings, Dale street:—

*Roberts & Sloss, Liverpool.

London.—External painting of 160 flats at Haltonmansions, for the Islington B.C. Mr. C. A. Wilson, Housing Estates Manager:—

S. Shaw	£1,390	0
S. Gilmor, Ltd.	1,308	0
Page, Hinchman & Co.	1,300	0
J. C. Mather & Son	1,135	0
Falkus (Public Works), Ltd.	1,100	0
Godding & Osbourne	1,027	0
Stevens & Sons	976	0
W. G. Bridgman & Son, Ltd.	893	0
A. C. McKinley	718	5
Arundel, Ltd.	630	0
J. W. Wood & Co.	601	0
‡J. Johnson	588	0

(All of London.)

London.—Improvements to the Elite Cinema, Wimbledon. Mr. R. Cromie, architect, Edgware-road, W.1:—

*Grace and Marsh, Ltd., Croydon.

London.—Provision of additional accommodation at the Central Library, for the Kensington B.C.:—

*Drew-Bear, Perks & Co., Ltd. ... £277 10 0
*Malcolm McLeod & Co., Ltd. ... 128 15 6

Luton.—Additions to the concert hall at the Social Working Men's Club and Institute, Park-lane, for the Committee. Mr. R. M. Godfrey, architect, Prudential-chambers:—

G. Day & Sons	£1,999	0	0
J. Frost	1,450	0	0
E. Pryer	1,450	0	0
C. H. White	1,446	0	0
H. Tennant	1,437	8	6
A. W. Butt, Ltd.	1,434	0	0
J. Tomkins & Son	1,419	0	0
Matthews & Welch	1,383	8	0
A. Oakley	1,375	0	0
Luton Building Co.	1,365	0	0
*F. Chandler	1,275	0	0

(All of Luton.)

Macclesfield.—Improvement and extension of the central heating at the infirmary. Mr. Percy Wright, architect, 27, King Edward-street:—

*W. Blackshaw & Co., Macclesfield ... £532

Macclesfield. — Improvements to High-street School, for St. George's Parochial Church Council. Mr. P. Wright, architect, 27, King Edward-street:—

*J. Clayton, Ltd., Macclesfield.

Manchester.—Reinforced concrete floors, beams, stairs, etc., structural steelwork and fixing, heating and hot water installation, storage tanks, fire escape, stairs, lifts and electric lighting required in connection with erection of a new nurses' home at Crumpsall Infirmary, Crescent-road, Crumpsall, for the B.G. Mr. A. J. Murgatroyd, architect, 23, Strutt-street. Quantities by Mr. Wm. Fishwick, 37, Brown-street:—

Concrete Work—
Fram Reinforced Concrete Co., Manchester.
J. Cooke & Sons, Huddersfield.
Combined Concrete Construction Co., Manchester.
Grip Steel Bar Co., Manchester.
Lee & Hall, Manchester.
*J. Gerrard & Sons, Swinton.

Steelwork—
*Robinson & Kershaw, Manchester.
E. Wood & Co., Manchester.
Bannister, Walton & Co., Trafford Park.
Redpath, Brown & Co., Trafford Park.

Manchester.—For provision of baths, sinks, etc., at Goulden-street Police Station, for the T.C. City Architect:—

*E. J. Coupe & Sons, Ltd., Manchester.

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Manchester.—Extensions to Churnett-street public hall, for the T.C. City Architect. Quantities also by the City Architect:—

*Tinker & Young, Ltd., Manchester.

Manchester.—Extensions to the stores for Messrs. Marks & Spencers, Ltd., bazaar merchants, Friendly House, 21 and 23, Chiswell-street, E.C.1. Mr. Norman Jones, F.R.I.B.A., architect, 329, Lord-street, Southport:—

*Bovis, Ltd., London.

Manchester.—Reconstruction of premises, for the proprietors of "The Don," tailors and clothiers, 86, Market-street:—

*Harris & Sheldon, Ltd., Manchester.

Granite—
*Bower & Florence, Ltd., Aberdeen.

Manchester.—Additions to the chapel and new sanitary conveniences at Eldon-street and Dow-street, Chorlton-on-Medlock, for the Trustees of the Eldon-street Chapel:—

*D. Walton & Co., Pendleton.

Mansfield.—Improvements to the War Memorial, for the Edwinstowe British Legion:—

*Lester & Brammer, Worksop.

Newcastle.—Alterations to the branch premises of the Westminster Bank, Ltd., Market-street. Messrs. Mauchlen & Weightman, architects, Collingwood-street:—

*S. Miller, Newcastle.

Northampton.—Additions to the "Mitre Inn," King-street. Mr. J. Gayton, architect, York-road:—

*R. Jackson, Northampton.

Portsmouth. — Reconstruction of Kent-street Council school, for the E.C. Mr. A. Sharp, architect, Guildhall. Quantities by Mr. A. E. Tutte, Commercial-road:—

L. Hoad, Southsea	£15,974
H. Jones, Southsea	15,850
— Humby, Farlington	15,792
F. Corke & Co., Southsea	15,600
Jno. Croad, Portsea	15,200
John Lay & Co., Portsmouth	14,974
E. & A. Sprigings, Portsmouth	14,444
Tanner Bros., Southsea	14,323
*S. Salter, Southsea	13,983

Portsmouth.—Reconstruction of a semaphore tower in Portsmouth Dockyard:—

*Playfair Toole, Ltd., Southampton (about) £60,000

Rochdale.—Works in connection with the proposed extensions to the Open Air School at Brownhill, for the C.B. Mr. S. H. Morgan, Borough Surveyor:—

*Thos. Wilkinson, Rochdale £1,200

Rotherham.—Alterations and additions to the present St. Joseph's School, Wath-on-Dearne. Messrs. Empsall, Clarkson & Clark, architects, Permanent-chambers, Peice Hall-yard, Bradford:—

*J. Horkin, Liversedge.

Sale.—Extensions and reconstruction of Savoy Cinema, Ashfield-road:—

*E. B. Jones & Rawlinson, Ltd., Salford £11,187

Salford.—Garage and other structural alterations at the Eccles New-road Institution, for the B.G. Messrs. W. Telford Gunson & Sons, L.R.I.B.A., architects, 10, Marsden-street, Manchester:—

*W. Gornall & Sons, Ltd., Salford.

Salford.—Improvements to the Bradford-road Primitive Methodist Church. Mr. I. Knowles, architect, 22, Bridge-street, Manchester:—

*Hall Construction Co., Ltd., Salford.

Saltburn.—Roman Catholic Church. Messrs. Kitching & Archibald, architects, Albert-road, Middlesbrough:—

*G. Fordy, Stockton-on-Tyne.

Sheffield.—Two new wards and portion of the isolation block, to accommodate 58 beds, at Lodge Moor Hospital, for the T.C.:—

*W. G. Robson £16,205

Sheffield.—Alterations to the existing offices in Sheaf-street, for the T.C. Mr. S. E. Fedden, General Manager and Engineer, Commercial-street. Quantities by the Engineer:—

*Thos. Roper & Sons, Ltd., Sheffield ... £3,913

Sheffield.—Structural steelwork and pre-cast reinforced concrete floors for proposed new stores and workshops to be erected on a site in Sheaf-street, for the Corporation. Mr. S. E. Fedden, General Manager and Engineer, Commercial-street. Quantities by the engineer:—

*Charles Ross, Ltd., Sheffield £3,265 10

Sheffield.—Church of St. Swithen's on the Manor estate, for the Rev. K. G. Speakman, vicar of St. Aidan's Church. The Park. Messrs. Gibbs, Flockton & Gibbs, architects, 15, St. James-row:—

*J. Longden & Sons, Ltd., Sheffield.

Smallburgh.—Corrugated iron building at Stalham, for the R.D.C. Mr. A. L. Taunton, surveyor, Stalham:—

*Tooley & Youngs, Stalham £192

Southmolton.—12 houses at Chulmleigh, for the R.D.C.:—

*Sanders & Son, Southmolton £4,789 12

Stornoway.—20 houses, 3-apartment type of blocks of 4 houses each, in Plantation-road, for the Town Council. Mr. William W. Conner, Burgh Surveyor. Quantities by the Burgh Surveyor:—

Mason Contractor—
*Anderson & Askew, Dunfermline £3,718 10 10
Joiner Contractor—
*Jas. Macrae & Son, Stornoway ... 2,094 5 0
Plumber Work—
*John McLeod, Stornoway 1,229 9 2
Painter Work—
*D. Mackenzie & Son, Stornoway 245 9 7
Slater Work—
*William Taylor & Son, Inverness 565 0 0
Plaster Work—
*Burness & Son, Montrose 1,000 0 0
Fencing, Footpaths, etc.—
*Angus McLeod, Stornoway 117 2 6

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*Wm. Green & Sons, Kippax £3,378

Wakefield.—Carrying out contract No. 8 at the sewage works, for the City Council:—

*H. Hainsworth £26,306 16 1

Wakefield.—Alterations and additions to the school at Belle Vue:—

*Wakefield Industrial Society, Westgate.
Joiner—*Broadhead & Son.
Plumber—*H. Gillott.
Heating—*J. Woodhead.
Plasterer—*Ellis & Longbottom.
Slater—*J. Ives.
Painter—*J. Hayers.
Electricity—*W. Robb, Ltd.
(All of Wakefield.)

Wayland.—4 houses at Attleborough, Besthorpe-road, for the R.D.C. Mr. Clifford Whitworth, surveyor, Attleborough:—

Harry Smith, Attleborough £1,645
*Tofts & Son, Hingham 1,560

West Molesey.—Extensions to the nurses home, etc., at the Isolation Hospital, for the East and West Molesey U.D.C. Mr. E. H. Hutton, surveyor:—

E. Potterton £396 19
G. Alderton & Sons 393 0
*Wheatley & Sons 378 0
(All of East Molesey.)

Winchester.—Enlarging the pavilion on the bowling green in the North Walls Recreation ground, for the T.C.:—

*W. & F. Gillman £243 15

Wolverhampton.—Houses, for the T.C.:—

‡A. M. Griffiths & Son, Ltd., 56 2-bedroom type houses at Willenhall-road estate £17,024
‡A. Powell, 44 2-bedroom type houses at Parkfield-road estate 13,332
‡A. M. Griffiths & Son, Ltd., 48 non-parlour type houses at Low Hill estate 17,496
‡A. Powell, 18 non-parlour type houses at Brickfields estate 6,533

Worcester.—New premises, for the Jap Furnishing Co., in Angel-street. Messrs. Yeates & Jones, architects, Foregate-street:—

*Haughton Bros., Worcester.

York.—18 parlour-type and 32 non-parlour-type houses adjoining Bad Bargain-lane, for the Corporation. Mr. F. W. Spurr, City Engineer:—

*J. Sawdon, Bridlington.

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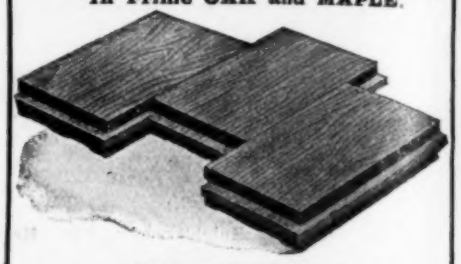
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